

Jeffries, Dawn (DEQ)

From: Jeffries, Dawn (DEQ)
Sent: Thursday, May 01, 2014 2:31 PM
To: 'John Coffman'
Cc: 'Lee Grieco'
Subject: Town of Broadway Regional WWTF, VPDES Permit No. VA0090263, Rockingham County

Dear Mr. Coffman:

Your application has been reviewed and appears to be complete and all sampling information has been received. The next steps involve assembling the information necessary to develop the permit limitations and then drafting the permit. Once the draft permit is prepared and the appropriate reviews are performed, I will transmit the draft permit and supporting documentation to you for review. I expect to have this draft permit package to you within the next 3 months.

The Department of Environmental Quality strives to complete the permitting process in a timely manner. If you have any questions about our procedures or the status of your draft permit, please do not hesitate to contact us.

Sincerely,
Dawn Jeffries
VA Dept. of Environmental Quality
Valley Regional Office
P.O. Box 3000
Harrisonburg, Virginia 22801
540-574-7898
dawn.jeffries@deq.virginia.gov

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY

VALLEY REGIONAL OFFICE

4411 Early Road - P.O. Box 3000

Harrisonburg, VA 22801

SUBJECT: Application Errata for VPDES Permit No. VA0090263, Broadway Regional Wastewater Treatment Facility, Rockingham County

TO: PP File

FROM: Dawn Jeffries

DATE: April 30, 2014

The following deficiencies were noted in the subject permit reissuance application:

Form 2A

Part D. Effluent Testing results are not recorded for a number of parameters. The missing data is available on the lab reports submitted with the application. Also, the number of samples for parameters in Part D should be '3', not '1' as three scans were completed.

Application Addendum

Item 1. Although question 7 indicates intermittent discharge, permit is written for a continuous discharge as it may often discharge for long periods of time without interruption.

The deficiencies noted are insignificant and will not affect the preparation of a legally and technically defensible draft permit.

Reviewer Concurrence: BWC 5/1/14



REI Consultants, Inc.
PO Box 286
Beaver, WV 25813
TEL: 304.255.2500
Website: www.reiclabs.com

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Roanoke, VA 24019
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Ashland, KY 41101
TEL: 606.393.5027

1557 Commerce Road, Suite 201
Verona, VA 24482
TEL: 540.248.0183

16 Commerce Drive
Westover, WV 26501
TEL: 304.241.5861

Thursday, May 15, 2014

Mr. John Coffman
TOWN OF BROADWAY
PO BOX 156
BROADWAY, VA 22815

TEL: (540) 896-7351
FAX: (540) 896-2982

RE:

Work Order #: 1405B49

Dear Mr. John Coffman:

REI Consultants, Inc. received 3 sample(s) on 5/9/2014 for the analyses presented in the following report.

Sincerely,

Stacy Heasley
Project Manager



Client: TOWN OF BROADWAY**Project:**

The analytical results presented in this report were produced using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. Verification of required sample preservation (as required) is recorded on associated laboratory logs. Any deviation from compliance or method modification is identified within the body of this report by a qualifier footnote which is defined at the bottom of this page.

All sample results for solid samples are reported on an "as-received" wet weight basis unless otherwise noted.

Results reported for sums of individual parameters, such as TTHM and HAA5, may vary slightly from the sum of the individual parameter results, due to rounding of individual results, as required by EPA.

The test results in this report meet all NELAP (and/or VELAP) requirements for parameters except as noted in this report.

Please note if the sample collection time is not provided on the Chain of Custody, the default recording will be 0:00:00. This may cause some tests to be apparently analyzed out of hold.

All tests performed by REIC Service Centers are designated by an annotation on the test code. All other tests were performed by REIC's Main Laboratory in Beaver, WV.

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DEFINITIONS:

MCL: Maximum Contaminant Level

MDL: Method Detection Limit; The lowest concentration of analyte that can be detected by the method in the applicable matrix.

Mg/Kg or mg/L: Units of part per million (PPM) - milligram per Kilogram (weight/weight) or milligram per Liter (weight/volume).

NA: Not Applicable

ND: Not Detected at the PQL or MDL

PQL: Practical Quantitation Limit; The lowest verified limit to which data is quantified without qualifications. Analyte concentrations below PQL are reported either as ND or as a number with a "J" qualifier.

Qual: Qualifier that applies to the analyte reported.

TIC: Tentatively Identified Compound, Estimated Concentration denoted by "J" qualifier.

Ug/Kg or ug/L: Units of part per billion (PPB) - microgram per kilogram (weight/weight) or microgram per liter (weight/volume).

QUALIFIERS:

*: Reported value exceeds required MCL

B: Analyte detected in the associated Method Blank at a concentration > 1/2 the PQL

E: Analyte concentration reported that exceeds the upper calibration standard. Greater uncertainty is associated with this result and data should be considered estimated.

H: Holding time for preparation or analysis has been exceeded.

J: Analyte concentration is reported, and is less than the PQL and greater than or equal to the MDL. The result reported is an estimate.

S: % REC (% recovery) exceeds control limits

CERTIFICATIONS:

Beaver, WV: WVDHHR 00412CM, WVDEP 060, VADCLS 00281, KYDEP 90039, TNDEQ TN02926, NCDWQ 466, PADEP 68-00839, VADCLS (VELAP) 460148

Bioassay (Beaver, WV): WVDEP 060, VADCLS(VELAP) 460148, PADEP 68-00839

Roanoke, VA: VADCLS(VELAP) 460150

Verona, VA: VADCLS(VELAP) 460151

Ashland, KY: KYDEP 00094, WV 389

Morgantown, WV: WVDHHR 003112M, WVDEP 387

REI Consultants, Inc. - Analytical Report**WO#: 1405B49****Date Reported: 5/15/2014**

Client: TOWN OF BROADWAY
Project:
Lab ID: 1405B49-01A
Client Sample ID: FINAL COMP

Collection Date: 5/9/2014 9:00:00 AM
Date Received: 5/9/2014
Matrix: Waste Water
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
BOD (Carbonaceous), 5 Day, 20°C							
		Method: SM5210 B-2001					Analyst: SP
Biochemical Oxygen Demand	4	2	NA		mg/L	5/10/2014 1:20 PM	5/15/2014 12:31 PM
AMMONIA NITROGEN							
		Method: EPA 350.1, Rev.2. (1993)					Analyst: HD
Nitrogen, Ammonia (As N)	ND	0.10	NA		mg/L		5/12/2014 7:15 PM

WO#: 1405B49

Client: TOWN OF BROADWAY
Project:
Lab ID: 1405B49-02A
Client Sample ID: FINAL GRAB

Collection Date: 5/9/2014 10:00:00 AM
Date Received: 5/9/2014
Matrix: Waste Water
Site ID:

Page 4 of 5

WO#: 1405B49

Date Reported: 5/15/2014

Client: TOWN OF BROADWAY
Project:
Lab ID: 1405B49-03A
Client Sample ID: FINAL

Collection Date: 5/9/2014 9:00:00 AM
Date Received: 5/9/2014
Matrix: Waste Water
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
ANIONS by ION CHROMATOGRAPHY		Method: EPA 300.0, Rev.2.1 (1993)				Analyst: CF	
Chloride	80.2	2.00	NA		mg/L		5/12/2014 8:35 PM



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Friday, April 11, 2014

Mr. John Coffman
TOWN OF BROADWAY
PO BOX 156
BROADWAY, VA 22815

TEL: (540) 896-7351
FAX: (540) 896-2982

RE:

Work Order #: 1404341

Dear Mr. John Coffman:

REI Consultants, Inc. received 1 sample(s) on 4/2/2014 for the analyses presented in the following report.

Sincerely,

Stacy Heasley
Project Manager



Client: TOWN OF BROADWAY**Project:**

The analytical results presented in this report were produced using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. Verification of required sample preservation (as required) is recorded on associated laboratory logs. Any deviation from compliance or method modification is identified within the body of this report by a qualifier footnote which is defined at the bottom of this page.

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TIC: Tentatively Identified Compound, Estimated Concentration denoted by "J" qualifier.

Ug/Kg or ug/L: Units of part per billion (PPB) - microgram per kilogram (weight/weight) or microgram per liter (weight/volume).

QUALIFIERS:

*: Reported value exceeds required MCL

B: Analyte detected in the associated Method Blank at a concentration > 1/2 the PQL

E: Analyte concentration reported that exceeds the upper calibration standard. Greater uncertainty is associated with this result and data should be considered estimated.

H: Holding time for preparation or analysis has been exceeded.

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CERTIFICATIONS:

Beaver, WV: WVDHHR 00412CM, WVDEP 060, VADCLS 00281, KYDEP 90039, TNDEQ TN02926, NCDWQ 466, PADEP 68-00839, VADCLS (VELAP) 460148

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Roanoke, VA: VADCLS(VELAP) 460150

Verona, VA: VADCLS(VELAP) 460151

Ashland, KY: KYDEP 00094, WV 389

Morgantown, WV: WVDHHR 003112M, WVDEP 387

REI Consultants, Inc. - Analytical Report

WO#: 1404341

Date Reported: 4/11/2014

Client: TOWN OF BROADWAY
Project:
Lab ID: 1404341-01A
Client Sample ID: FINAL

Collection Date: 4/1/2014 2:00:00 PM
Date Received: 4/2/2014
Matrix: Liquid
Site ID:

Analysis	Result	MDL	PQL	MCL	Qual	Units	Date Analyzed	NELAP
METALS BY ICP-MS		Method: EPA 200.8 Rev. 5.4 (1994)				Analyst: JD		

Selenium	ND	0.0010	0.0050	NA		mg/L	4/7/2014 12:06 PM	PAVA
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PESTICIDES/PCBS

Method: EPA 608

Analyst: NC

Aldrin	ND	0.000012	0.000051	NA		mg/L	4/5/2014 1:12 PM	PAVA
Chlordane	ND	0.000049	0.000515	NA		mg/L	4/5/2014 1:12 PM	PAVA
4,4'-DDD	ND	0.000010	0.000051	NA		mg/L	4/5/2014 1:12 PM	PAVA
4,4'-DDE	ND	0.000010	0.000051	NA		mg/L	4/5/2014 1:12 PM	PAVA
4,4'-DDT	ND	0.000011	0.000051	NA		mg/L	4/5/2014 1:12 PM	PAVA
Dieldrin	ND	0.000010	0.000051	NA		mg/L	4/5/2014 1:12 PM	PAVA
Endosulfan I	ND	0.000010	0.000051	NA		mg/L	4/5/2014 1:12 PM	PAVA
Endosulfan II	ND	0.000010	0.000051	NA		mg/L	4/5/2014 1:12 PM	PAVA
Endrin	ND	0.000010	0.000051	NA		mg/L	4/5/2014 1:12 PM	PAVA
Heptachlor	ND	0.000010	0.000051	NA		mg/L	4/5/2014 1:12 PM	PAVA
Toxaphene	ND	0.000059	0.000515	NA		mg/L	4/5/2014 1:12 PM	PAVA
Surr: tetrachloro-m-xylene	104	NA	19.49-150	NA		%REC	4/5/2014 1:12 PM	

Notes:

The associated batch matrix spike exceeds REIC control limits.

SEMIVOLATILE ORGANIC COMPOUNDS

Method: EPA 625 (1982)

Analyst: JD

Benzo(a)anthracene	ND	0.0021	0.0106	NA		mg/L	4/8/2014 10:49 PM	PAVA
Benzo(a)pyrene	ND	0.0021	0.0106	NA		mg/L	4/8/2014 10:49 PM	PAVA
Benzo(b)fluoranthene	ND	0.0021	0.0106	NA		mg/L	4/8/2014 10:49 PM	PAVA
Benzo(k)fluoranthene	ND	0.0021	0.0106	NA		mg/L	4/8/2014 10:49 PM	PAVA
Chrysene	ND	0.0021	0.0106	NA		mg/L	4/8/2014 10:49 PM	PAVA
Surr: Nitrobenzene-d5	106	NA	62.2-110	NA		%REC	4/8/2014 10:49 PM	
Surr: 2-Fluorobiphenyl	79.3	NA	54.6-110	NA		%REC	4/8/2014 10:49 PM	
Surr: 4-Terphenyl-d14	75.4	NA	10.7-110	NA		%REC	4/8/2014 10:49 PM	

CYANIDE, Free

Method: SM4500-CN I-1997

Analyst: HD

Cyanide, Free	ND	0.005	0.020	NA		mg/L	4/14/2014 12:49 PM	
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16 Commerce Drive
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Monday, March 31, 2014

Mr. John Coffman
TOWN OF BROADWAY
PO BOX 156
BROADWAY, VA 22815

TEL: (540) 896-7351
FAX: (540) 896-2982

RE:

Work Order #: 1403N79

Dear Mr. John Coffman:

REI Consultants, Inc. received 2 sample(s) on 3/20/2014 for the analyses presented in the following report.

Sincerely,

Stacy Heasley
Project Manager



Client: TOWN OF BROADWAY**Project:**

The analytical results presented in this report were produced using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. Verification of required sample preservation (as required) is recorded on associated laboratory logs. Any deviation from compliance or method modification is identified within the body of this report by a qualifier footnote which is defined at the bottom of this page.

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QUALIFIERS:

*: Reported value exceeds required MCL

B: Analyte detected in the associated Method Blank at a concentration > 1/2 the PQL

E: Analyte concentration reported that exceeds the upper calibration standard. Greater uncertainty is associated with this result and data should be considered estimated.

H: Holding time for preparation or analysis has been exceeded.

J: Analyte concentration is reported, and is less than the PQL and greater than or equal to the MDL. The result reported is an estimate.

S: % REC (% recovery) exceeds control limits

CERTIFICATIONS:

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Bioassay (Beaver, WV): WVDEP 060, VADCLS(VELAP) 460148, PADEP 68-00839

Roanoke, VA: VADCLS(VELAP) 460150

Verona, VA: VADCLS(VELAP) 460151

Ashland, KY: KYDEP 00094, WV 389

Morgantown, WV: WVDHHR 003112M, WVDEP 387

REI Consultants, Inc. - Analytical Report

WO#: 1403N79

Date Reported: 3/31/2014

Client: TOWN OF BROADWAY
Project:
Lab ID: 1403N79-01A
Client Sample ID: FINAL

Collection Date: 3/20/2014 9:00:00 AM
Date Received: 3/20/2014
Matrix: Waste Water
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
METALS BY ICP-MS		Method: EPA 200.8		EPA 200.2		Analyst: JD	
Antimony	ND	0.0010	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 12:30 PM
Arsenic	ND	0.0050	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 12:30 PM
Beryllium	ND	0.0010	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 12:30 PM
Cadmium	ND	0.0010	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 2:26 PM
Chromium	ND	0.0050	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 12:30 PM
Copper	ND	0.0050	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 12:30 PM
Lead	ND	0.0010	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 12:30 PM
Nickel	ND	0.0100	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 2:26 PM
Selenium	ND	0.0050	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 12:30 PM
Silver	ND	0.0050	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 12:30 PM
Thallium	ND	0.0010	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 2:26 PM
Zinc	0.0251	0.0100	NA		mg/L	3/24/2014 12:45 PM	3/25/2014 12:30 PM
HARDNESS		Method: SM2340 B-1997		EPA 200.2		Analyst: CGW	
Hardness, Total (As CaCO3)	267	1.00	NA		mg/L	3/27/2014 11:15 AM	3/28/2014 10:28 PM
MERCURY, Total		Method: EPA 245.1		EPA 245.1		Analyst: DS	
Mercury	ND	0.0010	NA		mg/L	3/26/2014 1:34 PM	3/27/2014 10:56 AM
SEMIVOLATILE ORGANIC COMPOUNDS		Method: EPA 625		SW3510		Analyst: JD	
- Acenaphthene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Acenaphthylene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Anthracene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Benzidine	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Benzo(a)anthracene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Benzo(a)pyrene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Benzo(b)fluoranthene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Benzo(g,h,i)perylene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Benzo(k)fluoranthene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Bis(2-chloroethoxy)methane	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Bis(2-chloroethyl)ether	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Bis(2-chloroisopropyl)ether	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Bis(2-ethylhexyl)phthalate	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- 4-Bromophenyl phenyl ether	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Butyl benzyl phthalate	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- 4-Chloro-3-methylphenol	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- 2-Chloronaphthalene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- 2-Chlorophenol	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- 4-Chlorophenyl phenyl ether	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
- Chrysene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM

REI Consultants, Inc. - Analytical Report

WO#: 1403N79

Date Reported: 3/31/2014

Client: TOWN OF BROADWAY
Project:
Lab ID: 1403N79-01A
Client Sample ID: FINAL

Collection Date: 3/20/2014 9:00:00 AM
Date Received: 3/20/2014
Matrix: Waste Water
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
-Dibenzo(a,h)anthracene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Di-n-butyl phthalate	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-1,2-Dichlorobenzene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-1,3-Dichlorobenzene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-1,4-Dichlorobenzene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-3,3'-Dichlorobenzidine	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-2,4-Dichlorophenol	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Diethyl phthalate	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Dimethyl phthalate	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-2,4-Dimethylphenol	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-4,6-Dinitro-2-methylphenol	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-2,4-Dinitrophenol	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-2,4-Dinitrotoluene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
2,6-Dinitrotoluene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
Di-n-octyl phthalate	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-1,2-Diphenylhydrazine	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Fluoranthene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Fluorene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Hexachlorobenzene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Hexachlorobutadiene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Hexachlorocyclopentadiene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Hexachloroethane	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Indeno(1,2,3-cd)pyrene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Isophorone	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
Naphthalene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Nitrobenzene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
2-Nitrophenol	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
4-Nitrophenol	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-N-Nitrosodimethylamine	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-N-Nitrosodiphenylamine	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-N-Nitrosodi-n-propylamine	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Pentachlorophenol	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
Phenanthrene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Phenol	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-Pyrene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-1,2,4-Trichlorobenzene	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
-2,4,6-Trichlorophenol	ND	0.0102	NA		mg/L	3/24/2014 8:46 AM	3/24/2014 10:03 PM
Sum: 2-Fluorophenol	43.4	25.9-110	NA		%REC	3/24/2014 8:46 AM	3/24/2014 10:03 PM
Sum: Phenol-d5	34.8	8.2-110	NA		%REC	3/24/2014 8:46 AM	3/24/2014 10:03 PM
Sum: 2,4,6-Tribromophenol	68.5	61.7-110	NA		%REC	3/24/2014 8:46 AM	3/24/2014 10:03 PM
Sum: Nitrobenzene-d5	81.8	62.2-110	NA		%REC	3/24/2014 8:46 AM	3/24/2014 10:03 PM

REI Consultants, Inc. - Analytical Report

WO#: 1403N79

Date Reported: 3/31/2014

Client: TOWN OF BROADWAY
Project:
Lab ID: 1403N79-01A
Client Sample ID: FINAL

Collection Date: 3/20/2014 9:00:00 AM
Date Received: 3/20/2014
Matrix: Waste Water
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
Surr: 2-Fluorobiphenyl	77.3	54.6-110	NA		%REC	3/24/2014 8:46 AM	3/24/2014 10:03 PM
Surr: 4-Terphenyl-d14	72.1	10.7-110	NA		%REC	3/24/2014 8:46 AM	3/24/2014 10:03 PM
ACROLEIN BY E624		Method: EPA 624				Analyst: RB	
~Acrolein	ND	10	NA		µg/L		3/21/2014 5:33 PM
VOLATILE ORGANIC COMPOUNDS		Method: EPA 624				Analyst: RB	
1,1,1-Trichloroethane	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~1,1,2,2-Tetrachloroethane	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~1,1,2-Trichloroethane	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
1,1-Dichloroethane	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~1,1-Dichloroethene	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~1,2-Dichloroethane	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~1,2-Dichloropropane	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
2-Chloroethyl vinyl ether	ND	5.00	NA		µg/L		3/21/2014 5:33 PM
~Acrylonitrile	ND	10.0	NA		µg/L		3/21/2014 5:33 PM
~Benzene	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Bromodichloromethane	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Bromoform	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Bromomethane	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Carbon tetrachloride	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Chlorobenzene	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
Chloroethane	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Chloroform	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
Chloromethane	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~cis-1,3-Dichloropropene	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Dibromochloromethane	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Ethylbenzene	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Methylene chloride	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Tetrachloroethene	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Toluene	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~trans-1,2-Dichloroethene	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
trans-1,3-Dichloropropene	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Trichloroethene	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
~Vinyl chloride	ND	1.00	NA		µg/L		3/21/2014 5:33 PM
Surr: 1,2-Dichloroethane-d4	106	68.7-129	NA		%REC		3/21/2014 5:33 PM
Surr: 4-Bromofluorobenzene	91.7	71.8-127	NA		%REC		3/21/2014 5:33 PM
Surr: Toluene-d8	96.0	71.4-129	NA		%REC		3/21/2014 5:33 PM

PHENOLICS

Method: EPA 420.1

Analyst: BA

Phenolics	ND	0.010	NA		mg/L		3/25/2014 1:00 PM
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REI Consultants, Inc. - Analytical Report**WO#: 1403N79****Date Reported: 3/31/2014**

Client: TOWN OF BROADWAY
Project:
Lab ID: 1403N79-01A
Client Sample ID: FINAL

Collection Date: 3/20/2014 9:00:00 AM
Date Received: 3/20/2014
Matrix: Waste Water
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
Cyanide	Method: EPA 335.4					Analyst: HD	
Cyanide, Total	ND	0.020	NA		mg/L	3/24/2014 7:30 AM	3/24/2014 12:15 PM

REI Consultants, Inc. - Analytical Report

WO#: 1403N79

Date Reported: 3/31/2014

Client: TOWN OF BROADWAY
Project:
Lab ID: 1403N79-02A
Client Sample ID: TRIP BLANK

Collection Date: 3/20/2014 12:00:00 AM
Date Received: 3/20/2014
Matrix: Trip Blank
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
ACROLEIN BY E624		Method: EPA 624				Analyst: RB	
Acrolein	ND	10	NA		µg/L		3/21/2014 6:06 PM
VOLATILE ORGANIC COMPOUNDS		Method: EPA 624				Analyst: RB	
1,1,1-Trichloroethane	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
1,1,2,2-Tetrachloroethane	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
1,1,2-Trichloroethane	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
1,1-Dichloroethane	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
1,1-Dichloroethene	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
1,2-Dichloroethane	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
1,2-Dichloropropane	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
2-Chloroethyl vinyl ether	ND	5.00	NA		µg/L		3/21/2014 6:06 PM
Acrylonitrile	ND	10.0	NA		µg/L		3/21/2014 6:06 PM
Benzene	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Bromodichloromethane	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Bromoform	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Bromomethane	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Carbon tetrachloride	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Chlorobenzene	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Chloroethane	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Chloroform	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Chloromethane	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
cis-1,3-Dichloropropene	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Dibromochloromethane	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Ethylbenzene	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Methylene chloride	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Tetrachloroethene	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Toluene	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
trans-1,2-Dichloroethene	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
trans-1,3-Dichloropropene	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Trichloroethene	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Vinyl chloride	ND	1.00	NA		µg/L		3/21/2014 6:06 PM
Sum: 1,2-Dichloroethane-d4	108	68.7-129	NA		%REC		3/21/2014 6:06 PM
Sum: 4-Bromofluorobenzene	95.3	71.8-127	NA		%REC		3/21/2014 6:06 PM
Sum: Toluene-d8	97.5	71.4-129	NA		%REC		3/21/2014 6:06 PM



REI Consultants, Inc.
PO Box 286
Beaver, WV 25813
TEL: 304.255.2500
Website: www.reiclabs.com

Improving the environment, one client at a time...

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Roanoke, VA 24019
TEL: 540.777.1276

101 17th Street
Ashland, KY 41101
TEL: 606.393.5027

1557 Commerce Road, Suite 201
Verona, VA 24482
TEL: 540.248.0183

16 Commerce Drive
Westover, WV 26501
TEL: 304.241.5861

Tuesday, December 03, 2013

Mr. John Coffman
TOWN OF BROADWAY
PO BOX 156
BROADWAY, VA 22815

TEL: (540) 896-7351
FAX: (540) 896-2982

RE: PRIO_POL
Work Order #: 1311N87
Dear Mr. John Coffman:

REI Consultants, Inc. received 2 sample(s) on 11/21/2013 for the analyses presented in the following report.
Sincerely,

Stacy Heasley
Project Manager



Client: TOWN OF BROADWAY**Project:** PRIO_POL

The analytical results presented in this report were produced using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. Verification of required sample preservation (as required) is recorded on associated laboratory logs. Any deviation from compliance or method modification is identified within the body of this report by a qualifier footnote which is defined at the bottom of this page.

All sample results for solid samples are reported on an "as-received" wet weight basis unless otherwise noted.

Results reported for sums of individual parameters, such as TTHM and HAA5, may vary slightly from the sum of the individual parameter results, due to rounding of individual results, as required by EPA.

The test results in this report meet all NELAP (and/or VELAP) requirements for parameters except as noted in this report.

Please note if the sample collection time is not provided on the Chain of Custody, the default recording will be 0:00:00. This may cause some tests to be apparently analyzed out of hold.

All tests performed by REIC Service Centers are designated by an annotation on the test code. All other tests were performed by REIC's Main Laboratory in Beaver, WV.

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DEFINITIONS:

MCL: Maximum Contaminant Level

MDL: Method Detection Limit; The lowest concentration of analyte that can be detected by the method in the applicable matrix.

Mg/Kg or mg/L: Units of part per million (PPM) - milligram per Kilogram (weight/weight) or milligram per Liter (weight/volume).

NA: Not Applicable

ND: Not Detected at the PQL or MDL

PQL: Practical Quantitation Limit; The lowest verified limit to which data is quantified without qualifications. Analyte concentrations below PQL are reported either as ND or as a number with a "J" qualifier.

Qual: Qualifier that applies to the analyte reported.

TIC: Tentatively Identified Compound, Estimated Concentration denoted by "J" qualifier.

Ug/Kg or ug/L: Units of part per billion (PPB) - microgram per kilogram (weight/weight) or microgram per liter (weight/volume).

QUALIFIERS:

*: Reported value exceeds required MCL

B: Analyte detected in the associated Method Blank at a concentration > 1/2 the PQL

E: Analyte concentration reported that exceeds the upper calibration standard. Greater uncertainty is associated with this result and data should be considered estimated.

H: Holding time for preparation or analysis has been exceeded.

J: Analyte concentration is reported, and is less than the PQL and greater than or equal to the MDL. The result reported is an estimate.

S: % REC (% recovery) exceeds control limits

CERTIFICATIONS:

Beaver, WV: WVDHHR 00412CM, WVDEP 060, VADCLS 00281, KYDEP 90039, TNDEQ TN02926, NCDWQ 466, PADEP 68-00839, VADCLS (VELAP) 460148

Bioassay (Beaver, WV): WVDEP 060, VADCLS(VELAP) 460149, PADEP 68-00839

Roanoke, VA: VADCLS(VELAP) 460150

Verona, VA: VADCLS(VELAP) 460151

Ashland, KY: KYDEP 00094, WV 389

Morgantown, WV: WVDHHR 003112M, WVDEP 387

REI Consultants, Inc. - Analytical Report

WO#: 1311N87

Date Reported: 12/3/2013

Client: TOWN OF BROADWAY
Project: PRIO_POL
Lab ID: 1311N87-01A
Client Sample ID: FINAL

Collection Date: 11/20/2013 2:00:00 PM
Date Received: 11/21/2013
Matrix: Waste Water
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
METALS BY ICP-MS		Method: EPA 200.8		EPA 200.2		Analyst: JD	
Antimony	ND	0.0010	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
Arsenic	ND	0.0050	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
Beryllium	ND	0.0010	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
Cadmium	ND	0.0010	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
Chromium	ND	0.0050	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
Copper	ND	0.0050	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
Lead	ND	0.0010	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
Nickel	ND	0.0100	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
Selenium	ND	0.0050	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
Silver	ND	0.0050	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
Thallium	ND	0.0010	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
Zinc	0.0365	0.0100	NA		mg/L	11/26/2013 7:32 AM	11/27/2013 5:46 PM
HARDNESS		Method: SM2340 B		EPA 200.2		Analyst: JD	
Hardness, Total (As CaCO3)	380	1.00	NA		mg/L	11/25/2013 7:30 AM	11/25/2013 4:32 PM
MERCURY, Total		Method: EPA 245.1		EPA 245.1		Analyst: DS	
Mercury	ND	0.0010	NA		mg/L	11/27/2013 10:19 A	11/27/2013 2:46 PM
SEMIVOLATILE ORGANIC COMPOUNDS		Method: EPA 625		SW3510		Analyst: JD	
Acenaphthene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Acenaphthylene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Anthracene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Benzidine	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Benzo(a)anthracene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Benzo(a)pyrene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Benzo(b)fluoranthene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Benzo(g,h,i)perylene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Benzo(k)fluoranthene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Bis(2-chloroethoxy)methane	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Bis(2-chloroethyl)ether	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Bis(2-chloroisopropyl)ether	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Bis(2-ethylhexyl)phthalate	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
4-Bromophenyl phenyl ether	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Butyl benzyl phthalate	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
4-Chloro-3-methylphenol	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
2-Chloronaphthalene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
2-Chlorophenol	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
4-Chlorophenyl phenyl ether	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Chrysene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM

REI Consultants, Inc. - Analytical Report

WO#: 1311N87

Date Reported: 12/3/2013

Client: TOWN OF BROADWAY
Project: PRIO_POL
Lab ID: 1311N87-01A
Client Sample ID: FINAL

Collection Date: 11/20/2013 2:00:00 PM
Date Received: 11/21/2013
Matrix: Waste Water
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
Dibenzo(a,h)anthracene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Di-n-butyl phthalate	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
1,2-Dichlorobenzene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
1,3-Dichlorobenzene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
1,4-Dichlorobenzene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
3,3'-Dichlorobenzidine	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
2,4-Dichlorophenol	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Diethyl phthalate	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Dimethyl phthalate	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
2,4-Dimethylphenol	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
4,6-Dinitro-2-methylphenol	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
2,4-Dinitrophenol	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
2,4-Dinitrotoluene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
2,6-Dinitrotoluene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Di-n-octyl phthalate	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
1,2-Diphenylhydrazine	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Fluoranthene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Fluorene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Hexachlorobenzene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Hexachlorobutadiene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Hexachlorocyclopentadiene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Hexachloroethane	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Indeno(1,2,3-cd)pyrene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Isophorone	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Naphthalene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Nitrobenzene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
2-Nitrophenol	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
4-Nitrophenol	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
N-Nitrosodimethylamine	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
N-Nitrosodiphenylamine	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
N-Nitrosodi-n-propylamine	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Pentachlorophenol	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Phenanthrene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Phenol	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Pyrene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
1,2,4-Trichlorobenzene	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
2,4,6-Trichlorophenol	ND	0.0113	NA		mg/L	11/26/2013 10:21 A	11/30/2013 4:08 PM
Surr: 2-Fluorophenol	49.8	25.9-110	NA		%REC	11/26/2013 10:21 A	11/30/2013 4:08 PM
Surr: Phenol-d5	38.6	8.2-110	NA		%REC	11/26/2013 10:21 A	11/30/2013 4:08 PM
Surr: 2,4,6-Tribromophenol	77.6	61.7-110	NA		%REC	11/26/2013 10:21 A	11/30/2013 4:08 PM
Surr: Nitrobenzene-d5	77.7	62.2-110	NA		%REC	11/26/2013 10:21 A	11/30/2013 4:08 PM

REI Consultants, Inc. - Analytical Report

WO#: 1311N87

Date Reported: 12/3/2013

Client: TOWN OF BROADWAY
Project: PRIO_POL
Lab ID: 1311N87-01A
Client Sample ID: FINAL

Collection Date: 11/20/2013 2:00:00 PM
Date Received: 11/21/2013
Matrix: Waste Water
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
Surr: 2-Fluorobiphenyl	77.9	54.6-110	NA		%REC	11/26/2013 10:21 A	11/30/2013 4:08 PM
Surr: 4-Terphenyl-d14	61.0	10.7-110	NA		%REC	11/26/2013 10:21 A	11/30/2013 4:08 PM

ACROLEIN BY E624

Method: EPA 624

Analyst: RB

Acrolein	ND	10	NA		µg/L		11/22/2013 12:34 P
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VOLATILE ORGANIC COMPOUNDS

Method: EPA 624

Analyst: RB

-Benzene	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Bromodichloromethane	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Bromoform	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Bromomethane	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Carbon tetrachloride	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Chlorobenzene	ND	1.0	NA		µg/L		11/22/2013 12:34 P
Chloroethane	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Chloroform	ND	1.0	NA		µg/L		11/22/2013 12:34 P
Chloromethane	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Dibromochloromethane	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-1,1-Dichloroethane	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-1,2-Dichloroethane	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-1,1-Dichloroethene	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-trans-1,2-Dichloroethene	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-1,2-Dichloropropane	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-cis-1,3-Dichloropropene	ND	1.0	NA		µg/L		11/22/2013 12:34 P
trans-1,3-Dichloropropene	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Ethylbenzene	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Methylene chloride	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-1,1,2,2-Tetrachloroethane	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Tetrachloroethene	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Toluene	ND	1.0	NA		µg/L		11/22/2013 12:34 P
1,1,1-Trichloroethane	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-1,1,2-Trichloroethane	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Trichloroethene	ND	1.0	NA		µg/L		11/22/2013 12:34 P
-Vinyl chloride	ND	1.0	NA		µg/L		11/22/2013 12:34 P
Surr: 1,2-Dichloroethane-d4	98.9	73.2-133	NA		%REC		11/22/2013 12:34 P
Surr: Toluene-d8	98.9	71-132	NA		%REC		11/22/2013 12:34 P
Surr: 4-Bromofluorobenzene	93.7	74.2-129	NA		%REC		11/22/2013 12:34 P

VOLATILE ORGANIC COMPOUNDS-624

Method: EPA 624

Analyst: RB

2-Chloroethyl vinyl ether	ND	5.0	NA		µg/L		11/22/2013 12:34 P
Acrylonitrile	ND	10	NA		µg/L		11/22/2013 12:34 P

REI Consultants, Inc. - Analytical Report

WO#: 1311N87

Date Reported: 12/3/2013

Client: TOWN OF BROADWAY
Project: PRIO_POL
Lab ID: 1311N87-01A
Client Sample ID: FINAL

Collection Date: 11/20/2013 2:00:00 PM
Date Received: 11/21/2013
Matrix: Waste Water
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
PHENOLICS	Method: EPA 420.1					Analyst: MC	
Phenolics	ND	0.010	NA		mg/L		11/25/2013 3:30 AM
Cyanide	Method: EPA 335.4					Analyst: AL	
Cyanide, Total	ND	0.020	NA		mg/L	11/25/2013 9:20 AM	11/25/2013 12:25 P

REI Consultants, Inc. - Analytical Report

WO#: 1311N87

Date Reported: 12/3/2013

Client: TOWN OF BROADWAY
Project: PRIO_POL
Lab ID: 1311N87-02A
Client Sample ID: TRIP BLANK

Collection Date: 11/20/2013 12:00:00 AM
Date Received: 11/21/2013
Matrix: Trip Blank
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
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ACROLEIN BY E624

Method: EPA 624

Analyst: RB

Acrolein	ND	10	NA		µg/L		11/22/2013 11:54 A
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VOLATILE ORGANIC COMPOUNDS

Method: EPA 624

Analyst: RB

Benzene	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Bromodichloromethane	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Bromoform	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Bromomethane	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Carbon tetrachloride	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Chlorobenzene	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Chloroethane	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Chloroform	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Chloromethane	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Dibromochloromethane	ND	1.0	NA		µg/L		11/22/2013 11:54 A
1,1-Dichloroethane	ND	1.0	NA		µg/L		11/22/2013 11:54 A
1,2-Dichloroethane	ND	1.0	NA		µg/L		11/22/2013 11:54 A
1,1-Dichloroethene	ND	1.0	NA		µg/L		11/22/2013 11:54 A
trans-1,2-Dichloroethene	ND	1.0	NA		µg/L		11/22/2013 11:54 A
1,2-Dichloropropane	ND	1.0	NA		µg/L		11/22/2013 11:54 A
cis-1,3-Dichloropropene	ND	1.0	NA		µg/L		11/22/2013 11:54 A
trans-1,3-Dichloropropene	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Ethylbenzene	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Methylene chloride	ND	1.0	NA		µg/L		11/22/2013 11:54 A
1,1,2,2-Tetrachloroethane	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Tetrachloroethene	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Toluene	ND	1.0	NA		µg/L		11/22/2013 11:54 A
1,1,1-Trichloroethane	ND	1.0	NA		µg/L		11/22/2013 11:54 A
1,1,2-Trichloroethane	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Trichloroethene	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Vinyl chloride	ND	1.0	NA		µg/L		11/22/2013 11:54 A
Surr: 1,2-Dichloroethane-d4	95.2	73.2-133	NA		%REC		11/22/2013 11:54 A
Surr: Toluene-d8	99.7	71-132	NA		%REC		11/22/2013 11:54 A
Surr: 4-Bromofluorobenzene	91.4	74.2-129	NA		%REC		11/22/2013 11:54 A

VOLATILE ORGANIC COMPOUNDS-624

Method: EPA 624

Analyst: RB

2-Chloroethyl vinyl ether	ND	5.0	NA		µg/L		11/22/2013 11:54 A
Acrylonitrile	ND	10	NA		µg/L		11/22/2013 11:54 A



REI Consultants, Inc.
PO Box 286
Beaver, WV 25813
TEL: 304.255.2500
Website: www.reiclabs.com

Improving the environment, one client at a time...

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Roanoke, VA 24019
TEL: 540.777.1276

101 17th Street
Ashland, KY 41101
TEL: 606.393.5027

1557 Commerce Road, Suite 201
Verona, VA 24482
TEL: 540.248.0183

16 Commerce Drive
Westover, WV 26501
TEL: 304.241.5861

Wednesday, October 16, 2013

Mr. John Coffman
TOWN OF BROADWAY
PO BOX 156
BROADWAY, VA 22815

TEL: (540) 896-7351
FAX: (540) 896-2982

RE: PRIO_POL

Work Order #: 1310691

Dear Mr. John Coffman:

REI Consultants, Inc. received 2 sample(s) on 10/4/2013 for the analyses presented in the following report.

Sincerely,

Stacy Heasley
Project Manager



Client: TOWN OF BROADWAY

Project: PRIO_POL

The analytical results presented in this report were produced using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. Verification of required sample preservation (as required) is recorded on associated laboratory logs. Any deviation from compliance or method modification is identified within the body of this report by a qualifier footnote which is defined at the bottom of this page.

All sample results for solid samples are reported on an "as-received" wet weight basis unless otherwise noted.

Results reported for sums of individual parameters, such as TTHM and HAA5, may vary slightly from the sum of the individual parameter results, due to rounding of individual results, as required by EPA.

The test results in this report meet all NELAP (and/or VELAP) requirements for parameters except as noted in this report.

Please note if the sample collection time is not provided on the Chain of Custody, the default recording will be 0:00:00. This may cause some tests to be apparently analyzed out of hold.

All tests performed by REIC Service Centers are designated by an annotation on the test code. All other tests were performed by REIC's Main Laboratory in Beaver, WV.

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DEFINITIONS:

MCL: Maximum Contaminant Level

MDL: Method Detection Limit; The lowest concentration of analyte that can be detected by the method in the applicable matrix.

Mg/Kg or mg/L: Units of part per million (PPM) - milligram per Kilogram (weight/weight) or milligram per Liter (weight/volume).

NA: Not Applicable

ND: Not Detected at the PQL or MDL

PQL: Practical Quantitation Limit; The lowest verified limit to which data is quantified without qualifications. Analyte concentrations below PQL are reported either as ND or as a number with a "J" qualifier.

Qual: Qualifier that applies to the analyte reported.

TIC: Tentatively Identified Compound, Estimated Concentration

Ug/Kg or ug/L: Units of part per billion (PPB) - microgram per kilogram (weight/weight) or microgram per liter (weight/volume).

QUALIFIERS:

*: Reported value exceeds required MCL

B: Analyte detected in the associated Method Blank at a concentration > 1/2 the PQL

E: Analyte concentration reported that exceeds the upper calibration standard. Greater uncertainty is associated with this result and data should be considered estimated.

H: Holding time for preparation or analysis has been exceeded.

J: Analyte concentration is reported, and is less than the PQL and greater than or equal to the MDL. The result reported is an estimate.

S: % REC (% recovery) exceeds control limits

CERTIFICATIONS:

Beaver, WV: WVDHHR 00412CM, WVDEP 060, VADCLS 00281, KYDEP 90039, TNDEQ TN02926, NCDWQ 466, PADEP 68-00839, VADCLS (VELAP) 460148

Bioassay (Beaver, WV): WVDEP 060, VADCLS(VELAP) 460149, PADEP 68-00839

Roanoke, VA: VADCLS(VELAP) 460150

Verona, VA: VADCLS(VELAP) 460151

Ashland, KY: KYDEP 00094, WV 389

Morgantown, WV: WVDHHR 003112M, WVDEP 387

REI Consultants, Inc. - Analytical Report

WO#: 1310691

Date Reported: 10/16/2013

Client: TOWN OF BROADWAY
Project: PRIO_POL
Lab ID: 1310691-01A
Client Sample ID: FINAL

Collection Date: 10/3/2013 2:00:00 PM
Date Received: 10/4/2013
Matrix: Liquid
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
METALS BY ICP-MS		Method: EPA 200.8		EPA 200.2		Analyst: JD	
Antimony	ND	0.0010	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
Arsenic	ND	0.0050	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
Beryllium	ND	0.0010	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
Cadmium	ND	0.0010	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
Chromium	ND	0.0050	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
Copper	ND	0.0050	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
Lead	ND	0.0010	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
Nickel	ND	0.0100	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
Selenium	ND	0.0050	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
Silver	ND	0.0050	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
Thallium	ND	0.0010	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
Zinc	0.0160	0.0100	NA		mg/L	10/9/2013 7:46 AM	10/9/2013 4:45 PM
HARDNESS		Method: SM2340 B		EPA 200.2		Analyst: LF	
Hardness, Total (As CaCO3)	396	1.00	NA		mg/L	10/8/2013 7:33 AM	10/8/2013 8:03 PM
MERCURY, Total		Method: EPA 245.1		EPA 245.1		Analyst: DS	
Mercury	ND	0.0010	NA		mg/L	10/7/2013 12:55 PM	10/8/2013 12:33 PM
SEMIVOLATILE ORGANIC COMPOUNDS		Method: EPA 625		SW3510		Analyst: JD	
Acenaphthene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Acenaphthylene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Anthracene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Benzidine	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/15/2013 12:53 A
Benzo(a)anthracene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Benzo(a)pyrene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Benzo(b)fluoranthene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Benzo(g,h,i)perylene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Benzo(k)fluoranthene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Bis(2-chloroethoxy)methane	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Bis(2-chloroethyl)ether	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Bis(2-chloroisopropyl)ether	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Bis(2-ethylhexyl)phthalate	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
4-Bromophenyl phenyl ether	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Butyl benzyl phthalate	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
4-Chloro-3-methylphenol	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
2-Chloronaphthalene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
2-Chlorophenol	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
4-Chlorophenyl phenyl ether	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Chrysene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM

REI Consultants, Inc. - Analytical Report

WO#: 1310691

Date Reported: 10/16/2013

Client: TOWN OF BROADWAY
Project: PRIO_POL
Lab ID: 1310691-01A
Client Sample ID: FINAL

Collection Date: 10/3/2013 2:00:00 PM
Date Received: 10/4/2013
Matrix: Liquid
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
Dibenzo(a,h)anthracene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Di-n-butyl phthalate	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
1,2-Dichlorobenzene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
1,3-Dichlorobenzene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
1,4-Dichlorobenzene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
3,3'-Dichlorobenzidine	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
2,4-Dichlorophenol	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Diethyl phthalate	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Dimethyl phthalate	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
2,4-Dimethylphenol	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
4,6-Dinitro-2-methylphenol	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
2,4-Dinitrophenol	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
2,4-Dinitrotoluene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
2,6-Dinitrotoluene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Di-n-octyl phthalate	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
1,2-Diphenylhydrazine	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Fluoranthene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Fluorene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Hexachlorobenzene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Hexachlorobutadiene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Hexachlorocyclopentadiene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Hexachloroethane	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Indeno(1,2,3-cd)pyrene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Isophorone	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Naphthalene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Nitrobenzene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
2-Nitrophenol	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
4-Nitrophenol	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
N-Nitrosodimethylamine	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
N-Nitrosodiphenylamine	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
N-Nitrosodi-n-propylamine	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Pentachlorophenol	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Phenanthrene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Phenol	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Pyrene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
1,2,4-Trichlorobenzene	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/11/2013 5:58 PM
2,4,6-Trichlorophenol	ND	0.0104	NA		mg/L	10/10/2013 1:32 PM	10/15/2013 12:53 A
Surr: 2-Fluorophenol	55.8	25.9-110	NA		%REC	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Surr: Phenol-d5	41.9	8.2-110	NA		%REC	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Surr: 2,4,6-Tribromophenol	87.6	61.7-110	NA		%REC	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Surr: Nitrobenzene-d5	90.4	62.2-110	NA		%REC	10/10/2013 1:32 PM	10/11/2013 5:58 PM

REI Consultants, Inc. - Analytical Report

WO#: 1310691

Date Reported: 10/16/2013

Client: TOWN OF BROADWAY
Project: PRIO_POL
Lab ID: 1310691-01A
Client Sample ID: FINAL

Collection Date: 10/3/2013 2:00:00 PM
Date Received: 10/4/2013
Matrix: Liquid
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
Surr: 2-Fluorobiphenyl	81.8	54.6-110	NA		%REC	10/10/2013 1:32 PM	10/11/2013 5:58 PM
Surr: 4-Terphenyl-d14	69.7	10.7-110	NA		%REC	10/10/2013 1:32 PM	10/11/2013 5:58 PM
ACROLEIN BY E624		Method: EPA 624				Analyst: RB	
Acrolein	ND	10	NA	H	µg/L		10/9/2013 4:11 AM
VOLATILE ORGANIC COMPOUNDS		Method: EPA 624				Analyst: RB	
Benzene	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Bromodichloromethane	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Bromoform	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Bromomethane	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Carbon tetrachloride	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Chlorobenzene	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Chloroethane	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Chloroform	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Chloromethane	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Dibromochloromethane	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
1,1-Dichloroethane	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
1,2-Dichloroethane	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
1,1-Dichloroethene	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
trans-1,2-Dichloroethene	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
1,2-Dichloropropane	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
cis-1,3-Dichloropropene	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
trans-1,3-Dichloropropene	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Ethylbenzene	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Methylene chloride	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
1,1,2,2-Tetrachloroethane	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Tetrachloroethene	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Toluene	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
1,1,1-Trichloroethane	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
1,1,2-Trichloroethane	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Trichloroethene	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Vinyl chloride	ND	1.0	NA		µg/L		10/9/2013 4:11 AM
Surr: 1,2-Dichloroethane-d4	104	73.2-133	NA		%REC		10/9/2013 4:11 AM
Surr: Toluene-d8	103	71-132	NA		%REC		10/9/2013 4:11 AM
Surr: 4-Bromofluorobenzene	112	74.2-129	NA		%REC		10/9/2013 4:11 AM
VOLATILE ORGANIC COMPOUNDS-624		Method: EPA 624				Analyst: RB	
2-Chloroethyl vinyl ether	ND	5.0	NA		µg/L		10/9/2013 4:11 AM
Acrylonitrile	ND	10	NA		µg/L		10/9/2013 4:11 AM

REI Consultants, Inc. - Analytical Report

WO#: 1310691

Date Reported: 10/16/2013

Client: TOWN OF BROADWAY
Project: PRIO_POL
Lab ID: 1310691-02A
Client Sample ID: TRIP BLANK

Collection Date: 10/3/2013 12:00:00 AM
Date Received: 10/4/2013
Matrix: Liquid
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
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ACROLEIN BY E624

Method: EPA 624

Analyst: RB

Acrolein	ND	10	NA	H	µg/L		10/9/2013 4:44 AM
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VOLATILE ORGANIC COMPOUNDS

Method: EPA 624

Analyst: RB

Benzene	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Bromodichloromethane	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Bromoform	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Bromomethane	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Carbon tetrachloride	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Chlorobenzene	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Chloroethane	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Chloroform	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Chloromethane	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Dibromochloromethane	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
1,1-Dichloroethane	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
1,2-Dichloroethane	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
1,1-Dichloroethene	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
trans-1,2-Dichloroethene	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
1,2-Dichloropropane	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
cis-1,3-Dichloropropene	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
trans-1,3-Dichloropropene	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Ethylbenzene	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Methylene chloride	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
1,1,2,2-Tetrachloroethane	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Tetrachloroethene	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Toluene	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
1,1,1-Trichloroethane	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
1,1,2-Trichloroethane	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Trichloroethene	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Vinyl chloride	ND	1.0	NA		µg/L		10/9/2013 4:44 AM
Surr: 1,2-Dichloroethane-d4	104	73.2-133	NA		%REC		10/9/2013 4:44 AM
Surr: Toluene-d8	104	71-132	NA		%REC		10/9/2013 4:44 AM
Surr: 4-Bromofluorobenzene	112	74.2-129	NA		%REC		10/9/2013 4:44 AM

VOLATILE ORGANIC COMPOUNDS-624

Method: EPA 624

Analyst: RB

2-Chloroethyl vinyl ether	ND	5.0	NA		µg/L		10/9/2013 4:44 AM
Acrylonitrile	ND	10	NA		µg/L		10/9/2013 4:44 AM

BROADWAY WASTEWATER FACILITY

15524 New Market Rd, Timberville, VA 22853
Phone (540) 896-7351 Fax (540) 896-2762

RECEIVED
DEQ - Valley

OCT 21 2013

To: DMJ
FILE: _____

October 21, 2013

Ms. Dawn Jeffries
Department of Environmental Quality
Valley Regional Office
P.O. Box 3000
4411 Early Road
Harrisonburg, Virginia 22801

Re: Submittal of Permit Reissuance Application for the Broadway Regional Wastewater Treatment Facility. Permit Number: VA 0090263

Dear Ms. Jeffries:

Broadway Wastewater is pleased to have submitted the Permit Reissuance application for your approval on September 20, 2013. Included in this packet was the EPA Form 3510-2A, VPDES Sewage Sludge Permit Application Form, VPDES Application Addendum, Permit Billing Information Form, Public Notice Billing Information Form, and responses to questions from the Virginia Pollution Abatement Permit Application Form C.

A change in frequency of CBOD, Ammonia-N, E. Coli, Oil and Grease, Toxicity testing on effluent is requested, as well as a reduction in the frequency of Groundwater monitoring and an increase in the maximum amount of water applied through irrigation on a single pass across the field.

The old permit requires testing of CBOD and Ammonia-N every day of the week which presents some difficulties with cost and holding time constraints, especially on Holidays. Due to time constraints with CBOD 48-hour holding time and cost concerns, we request that the frequency of testing for CBOD and Ammonia-N be reduced to three days per week. There haven't been any violations of CBOD limits since the issuance of the previous permit in October of 2009. There was one violation of Ammonia-N limits in September of 2012. River discharge had been cut off through most of July and all of August to facilitate repairs to the baffle curtains. When river discharge began again in September, problems treating Ammonia were noticed and river discharge was cut off again while the Treatment System returned to normal. We feel that this was an isolated incident due to the irregular operation while the baffle curtains were being repaired in the preceding months. BRWWTF staff is vigilant in inspecting the Ammonia

BROADWAY WASTEWATER FACILITY

15524 New Market Rd, Timberville, VA 22853
Phone (540) 896-7351 Fax (540) 896-2782

treatment and the facility is capable of diverting discharge to the large Storage Reservoir if Ammonia levels begin to rise.

The old permit requires testing of E. Coli three days per week in 48 hour intervals. We request that the frequency be changed to once per week in the new permit. There have been no violations of E. Coli limits since the issuance of the previous permit in October of 2009.

The old permit requires testing of Oil and Grease twice per month. We request that the frequency be changed to once per month. There are no limits for Oil and Grease established in the permit and there haven't been any Oil and Grease results above the quantification limit of 5 mg/L since the issuance of the previous permit.

The old permit requires Quarterly Chronic and Acute Toxicity testing for both Ceriodaphnia Dubia and Fathead Minnows. We would like to reduce the frequency of these tests as we have had no issues with Acute Toxicity in Fathead Minnows and only one high value for Acute Toxicity in Ceriodaphnia Dubia which was immediately reran and found to be within permit limits.

The old permit requires Groundwater monitoring biannually. We would like to reduce this frequency to once per year. With the upgrade of the treatment system, there is very little ammonia and phosphorus in irrigation water and we believe there is no impact on groundwater quality.

Lastly, BRWWTF would like to request a change in the maximum allowable irrigation in a single irrigation rig pass. Currently, we are limited to an application of 0.50 inches of irrigation per irrigation rig pass across a given field and we request an increase to a maximum 1.0 inches per pass. We are already limited by the soil moisture graphs to maintain irrigation below the soil saturation point and feel that only being able to irrigate 0.50 inches in hot conditions seriously limits the amount of water that is actually made available to the crops due to evaporation. After talking with the farmers, they also would like to see us go to 1.0 inches per pass because the leaves and tassles of the corn and soybeans would not stay wet so long by putting the same amount of water on the fields with less passes. Also, by allowing more irrigation during a single pass, the wear and tear on the irrigation rigs would be greatly reduced as they would not have to complete two passes to apply the same amount of water.

Several items we discussed in our meeting on October 11, 2013 are also included with this letter.

1. Storm Water No Exposure Certification
2. A copy of the Notice of Necessary Information sent to Agrisludge, Inc.
3. A Certificate of Analysis for Irrigation parameters
4. Copper and Zinc tests results on sludge from 2011

DEQ VALLEY

OCT 21 2013

To: _____
Date: _____

BROADWAY WASTEWATER FACILITY

**15524 New Market Rd, Timberville, VA 22853
Phone (540) 896-7351 Fax (540) 896-2782**

If you need more information or have questions, please call us at 540-896-7351.

Thank you for your continuing cooperation.

Sincerely,
Broadway Wastewater



Lee Grieco
Town of Broadway

DEQ VALLEY

OCT 21 2013

To: _____
Date: _____

*Broadway Regional
Wastewater Treatment Facility*

15524 New Market Road
Timberville, VA 22853
Phone (540) 896-7351 Fax (540) 896-2982

October 15, 2013

Tom Abraham
Agri-Sludge, Inc.
8047 State Route 754
Shreve, Ohio 44676

Re: Notice of Necessary Information
Broadway Regional Wastewater Treatment Facility
VPDES Permit No. VA0090263

Dear Mr. Abraham,

To be in compliance with the VPDES Permit Regulation (9 VAC 25-31-530.F) I am required to notify you that in the applying of our biosolids you must comply with the VPA Permit Regulation Part IX, Article 2 – Operational and Monitoring Requirements. Please see the attached notice and necessary information.

Should you have any questions on this matter please contact the Virginia Department of Environmental Quality – Valley Regional Office at 540 574-7800.

Sincerely,



Lee Grieco
Town of Broadway

DEQ VALLEY

OCT 21 2013

To: _____
Date: _____

NOTICE AND NECESSARY INFORMATION

Broadway Regional WWTF

Parameter	Concentration (mg/kg) Dry Weight	Pollutant Concentrations (Table 3, 9 VAC 25-31-540) (Monthly Average)	Ceiling Concentrations (Table 1, 9 VAC 25-31-540) (Daily Maximum)
Arsenic	< 0.200 mg/L	41 mg/kg	75 mg/kg
Cadmium	0.83	39 mg/kg	85 mg/kg
Copper	289	1500 mg/kg	4300 mg/kg
Lead	9.0	300 mg/kg	840 mg/kg
Mercury	< 0.001 mg/L	17 mg/kg	57 mg/kg
Molybdenum	< 0.100 mg/L	-	75 mg/kg
Nickel	17.3	420 mg/kg	420 mg/kg
Selenium	< 0.200 mg/L	100 mg/kg	100 mg/kg
Zinc	662	2800 mg/kg	7500 mg/kg

* Sludge may not be land applied if any pollutant exceeds these values.

Pathogen Reduction (9 VAC 25-31-710) ☐ Class A ☒ Class B

Vector Attraction Reduction (9 VAC 25-31-720)

☐ Option 1 ☐ Option 2 ☐ Option 3 ☒ Option 4
☐ Option 5 ☐ Option 6 ☐ Option 7 ☐ Option 8
☐ No vector attraction reduction options were performed

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name John E. Cuffman
 Title W.W. Supt.
 Signature John E. Cuffman
 Date Signed 10/15/13

DEQ VALLEY

OCT 21 2013

To: _____
Date: _____

REI Consultants, Inc. - Analytical Report

WO#: 1309392

Date Reported: 9/11/2013

Client: TOWN OF BROADWAY
Project: IRRIGATION TESTING
Lab ID: 1309392-01A
Client Sample ID: IRRIGATION

Collection Date: 9/3/2013 2:00:00 PM
Date Received: 9/4/2013
Matrix: Liquid
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
METALS BY ICP	Method: E200.7		E200.2		Analyst: LF		
Calcium	66.4	1.00	NA		mg/L	9/5/2013 4:24 PM	9/6/2013 11:41 AM
Magnesium	27.6	0.500	NA		mg/L	9/5/2013 4:24 PM	9/6/2013 11:41 AM
Potassium	14.2	0.500	NA		mg/L	9/5/2013 4:24 PM	9/6/2013 11:41 AM
Sodium	39.7	10.0	NA		mg/L	9/5/2013 4:24 PM	9/6/2013 11:44 AM
BOD, 5 Day, 20°C	Method: SM5210 B				Analyst: SP		
Biochemical Oxygen Demand	3	2	NA		mg/L	9/5/2013 11:08 AM	9/10/2013 10:14 AM
Chemical Oxygen Demand	Method: EPA410.4				Analyst: BA		
Chemical Oxygen Demand	15	10	NA		mg/L		9/6/2013 11:00 AM
ANIONS by ION CHROMATOGRAPHY	Method: E300.0				Analyst: CF		
Chloride	64.1	5.00	NA		mg/L		9/5/2013 11:09 AM
Sulfate	60.6	5.00	NA		mg/L		9/5/2013 11:09 AM
ANIONS by ION CHROMATOGRAPHY	Method: E300.0				Analyst: CF		
Nitrogen, Nitrate	1.75	0.50	NA		mg/L		9/5/2013 11:09 AM
TOTAL KJELDAHL NITROGEN (TKN)	Method: E351.2				Analyst: AL		
Nitrogen, Kjeldahl, Total	1.90	0.50	NA		mg/L	9/5/2013 11:00 AM	9/6/2013 10:00 AM
OIL and GREASE	Method: EPA1664A				Analyst: MC		
Oil & Grease	ND	5.0	NA		mg/L		9/6/2013 10:00 AM
PHOSPHORUS	Method: SM4500-P BE				Analyst: BA		
Phosphorus, Total	1.24	0.50	NA		mg/L		9/6/2013 11:15 AM
AMMONIA NITROGEN	Method: EPA350.1				Analyst: AL		
Nitrogen, Ammonia (As N)	1.22	0.10	NA		mg/L		9/5/2013 3:59 PM
TOTAL SUSPENDED SOLIDS	Method: SM2540 D				Analyst: SF		
Total Suspended Solids	7	1	NA		mg/L		9/5/2013 1:41 PM
ORGANIC CARBON, Total	Method: SM5310 C				Analyst: DSD		
Total Organic Carbon	5.31	1.00	NA		mg/L		9/5/2013 10:47 AM

DEQ VALLEY

OCT 21 2013

To: _____

Page 3 of 3 Date: _____

CHAIN OF CUSTODY RECORD



Research Environmental & Industrial Consultants, Inc.

MAIN LABORATORY & CORPORATE HEADQUARTERS:

P.O. Box 286 • 225 Industrial Park Rd. Beaver, WV 25813
800-999-0105 • 304-255-2500 • www.reiclabs.com

MID-OHIO VALLEY
Service Center
101 17th Street
Ashland, KY 41101
606-393-5027

**SHENANDOAH
Service Center**
1557 Commerce Rd., Ste 201
Verona, VA 24482
540-246-0183

ROANOKE
Service Center
3029-C Peters Creek Rd
Roanoke, VA 24019
540-777-1276

MORGANTOWN
Service Center
16 Commerce Drive
Westover, WV 26501
304-241-5861

SAMPLE LOG & ANALYSIS REQUEST

TURNAROUND TIME

RUSH TURNAROUND

NORMAL

5 DAY

3 DAY

2 DAY

1 DAY

*Rush work needs prior laboratory approval and will incur additional charges.

SAMPLE ID	No. & Type of Containers	Sampling Date/Time	Matrix	Sample Comp/Grab	0	0	0	0	3	3	1	2
Irrigation	1/P	9/3/12 2PM	W	G	X							
"	1/P	"	W	G		X						
"	2/P	"	W	G				X				
"	1/P	"	W	G					X			
"	1/P	"	W	G						X		
"	1/G	"	W	G							X	
"	2/G	"	W	G								X
"	1/P	"	W	G								X

ENTER PRESERVATIVE CODE:

- | | |
|----------------------|--------------------|
| 0 None | 5 Sodium Hydroxide |
| 1 Hydrochloric Acid | 6 Zinc Acetate |
| 2 Nitric Acid | 7 EDTA |
| 3 Sulfuric Acid | 8 Ascorbic Acid |
| 4 Sodium Thiosulfate | |

COMMENTS:

All analytical requests are subject to REIC's Standard Terms and Conditions.

Temperature at arrival: 2 °C	ICED? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
------------------------------	--

1	<i>[Signature]</i>	4/11/13 3:00pm	Assigned by supervisor	Date/Time	FAX RESULTS <input type="checkbox"/>	EMAIL RESULTS <input checked="" type="checkbox"/>
2	<i>[Signature]</i>	4/11/13 9:00am	Reassigned by supervisor	Date/Time	SHIPMENT <input type="checkbox"/> Hand Delivered <input checked="" type="checkbox"/> Other <input type="checkbox"/>	

COC-NCR-061312

DEQ VALLEY

OCT 21 2013

To: _____

Date: _____

REI Consultants, Inc.

Analytical Results

Date: 12-May-11

CLIENT: TOWN OF BROADWAY

WorkOrder 1105435 Lab ID 1105435-01A

Client Sample ID: SLUDGE

DateReceived 5/4/2011

Project:

Collection Date: 5/4/2011 9:45:00 AM

Site ID:

Matrix: SLUDGE

Analyses	Result Units	Qual	PQL	MCL	Prep Date	Date Analyzed
CALCIUM CARBONATE EQUIVALENT		ASTM C25-99.33			Analyst: SR	
Calcium Carbonate Equivalent	5.25 wt%		0.100	NA		05/11/11 12:00 AM
TCLP METALS BY ICP		SW1311/6010C			Analyst: JD	
Arsenic	ND mg/L		0.500	5.00	05/06/11 12:27 PM	05/06/11 6:12 PM
Barium	ND mg/L		1.00	100	05/06/11 12:27 PM	05/06/11 6:12 PM
Cadmium	ND mg/L		0.050	1.00	05/06/11 12:27 PM	05/06/11 6:12 PM
Chromium	ND mg/L		0.500	5.00	05/06/11 12:27 PM	05/06/11 6:12 PM
Lead	ND mg/L		0.500	5.00	05/06/11 12:27 PM	05/06/11 6:12 PM
Selenium	ND mg/L		0.200	1.00	05/06/11 12:27 PM	05/06/11 6:12 PM
Silver	ND mg/L		0.100	5.00	05/06/11 12:27 PM	05/06/11 6:12 PM
METALS BY ICP		SW6010C			Analyst: LF	
Arsenic	ND mg/Kg		5.00	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Cadmium	0.514 mg/Kg		0.500	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Copper	189 mg/Kg		2.50	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Lead	9.03 mg/Kg		5.00	NA	05/06/11 12:00 PM	05/11/11 11:47 AM
Molybdenum	5.38 mg/Kg		2.50	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Nickel	18.1 mg/Kg		2.50	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Phosphorus	33,000 mg/Kg		1,250	NA	05/06/11 12:00 PM	05/11/11 11:50 AM
Potassium	9,400 mg/Kg		125	NA	05/06/11 12:00 PM	05/09/11 1:14 PM
Selenium	ND mg/Kg		5.00	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Zinc	340 mg/Kg		1.25	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
NOTES:						
Calculation of the percent recovery on the matrix spike for Potassium was not applicable since the spike added was <30% of the sample's background concentration.						
Calculation of the percent recovery on the matrix spike for Phosphorus was not applicable since the spike added was <30% of the sample's background concentration.						
TCLP MERCURY		SW1311/7470			Analyst: CGW	
Mercury	ND mg/L		0.0020	0.200	05/06/11 10:10 AM	05/10/11 11:28 AM
MERCURY, TOTAL		SW7471B			Analyst: CGW	
Mercury	0.185 mg/Kg		0.100	NA	05/06/11 12:30 PM	05/10/11 11:42 AM
TCLP PERCENT SOLIDS		SW1311			Analyst: KD	
Percent Solids	100 wt%		NA	NA	05/05/11 12:00 AM	05/05/11 5:00 PM
PAINT FILTER		E9096			Analyst: KD	
Paint Filter	negative NA		NA	NA	05/05/11 12:00 AM	05/05/11 2:00 PM
IGNITABILITY		ASTM D92			Analyst: TM	
Ignitability	No flash to 240 °F		NA	NA		05/11/11 12:00 AM

Key: MCL Maximum Contaminant Level
 MDL Minimum Detection Limit
 NA Not Applicable
 ND Not Detected at the PQL or MDL
 PQL Practical Quantitation Limit
 TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
 E Estimated Value above quantitation range
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate Recovery exceeds REIC control limits
 * Value exceeds MCL or Regulatory Limits

Page 2 of 5

DEQ VALLEY

OCT 21 2013

To:

REI Consultants, Inc.

Analytical Results

Date: 12-May-11

CLIENT: TOWN OF BROADWAY

WorkOrder 1105435 Lab ID 1105435-01A

Client Sample ID: SLUDGE

DateReceived 5/4/2011

Project:

Collection Date: 5/4/2011 9:45:00 AM

Site ID:

Matrix: SLUDGE

Analyses	Result Units	Qual	PQL	MCL	Prep Date	Date Analyzed
TCLP HERBICIDES		SW1311/8151			Analyst: JC	
2,4,5-TP (Silvex)	ND mg/L		0.0049	1.00	05/08/11 8:16 AM	05/09/11 7:22 PM
2,4-D	ND mg/L		0.0098	10.0	05/08/11 8:16 AM	05/09/11 7:22 PM
Surr: DCAA	5.04 %REC		1-187	0.200	05/08/11 8:16 AM	05/09/11 7:22 PM
TCLP PESTICIDES		SW1311/8081			Analyst: JC	
Chlordane	ND mg/L		0.0124	0.0300	05/10/11 8:15 AM	05/11/11 6:52 AM
Endrin	ND mg/L		0.00124	0.0200	05/10/11 8:15 AM	05/11/11 6:52 AM
gamma-BHC	ND mg/L		0.00124	0.400	05/10/11 8:15 AM	05/11/11 6:52 AM
Heptachlor	ND mg/L		0.00124	0.00800	05/10/11 8:15 AM	05/11/11 6:52 AM
Heptachlor epoxide	ND mg/L		0.00124	0.00800	05/10/11 8:15 AM	05/11/11 6:52 AM
Methoxychlor	ND mg/L		0.00124	10.0	05/10/11 8:15 AM	05/11/11 6:52 AM
Toxaphene	ND mg/L		0.0124	0.500	05/10/11 8:15 AM	05/11/11 6:52 AM
Surr: Tetrachloro-m-xylene	52.0 %REC		22.8-159	NA	05/10/11 8:15 AM	05/11/11 6:52 AM
PCBS		SW8082			Analyst: JC	
Aroclor 1016	ND mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1221	ND mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1232	ND mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1242	ND mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1248	ND mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1254	ND mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1260	ND mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Surr: Tetrachloro-m-xylene	96.0 %REC		26.2-143	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
NOTES:						
Elevated PQLs are due to matrix interference.						
TCLP SEMIVOLATILES		SW1311/8270D			Analyst: CLS	
o-cresol	ND mg/L		0.025	200	05/09/11 8:37 AM	05/10/11 3:20 PM
m,p-cresol	ND mg/L		0.025	200	05/09/11 8:37 AM	05/10/11 3:20 PM
1,4-Dichlorobenzene	ND mg/L		0.025	7.50	05/09/11 8:37 AM	05/10/11 3:20 PM
2,4-Dinitrotoluene	ND mg/L		0.025	0.130	05/09/11 8:37 AM	05/10/11 3:20 PM
Hexachlorobenzene	ND mg/L		0.025	0.130	05/09/11 8:37 AM	05/10/11 3:20 PM
Hexachlorobutadiene	ND mg/L		0.025	0.500	05/09/11 8:37 AM	05/10/11 3:20 PM
Hexachloroethane	ND mg/L		0.025	3.00	05/09/11 8:37 AM	05/10/11 3:20 PM
Nitrobenzene	ND mg/L		0.025	2.00	05/09/11 8:37 AM	05/10/11 3:20 PM
Pentachlorophenol	ND mg/L		0.025	100	05/09/11 8:37 AM	05/10/11 3:20 PM
Pyridine	ND mg/L		0.025	5.00	05/09/11 8:37 AM	05/10/11 3:20 PM
2,4,5-Trichlorophenol	ND mg/L		0.025	400	05/09/11 8:37 AM	05/10/11 3:20 PM
2,4,6-Trichlorophenol	ND mg/L		0.025	2.00	05/09/11 8:37 AM	05/10/11 3:20 PM
Surr: 2,4,6-Tribromophenol	79.2 %REC		63.8-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
• Value exceeds MCL or Regulatory Limits

Page 3 of 5

DEQ VALLEY

OCT 21 2013

To: _____

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Analytical Results

Date: 12-May-11

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WorkOrder 1105435 Lab ID 1105435-01A

Client Sample ID: SLUDGE

DateReceived 5/4/2011

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Collection Date: 5/4/2011 9:45:00 AM

Site ID:

Matrix: SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
TCLP SEMIVOLATILES			SW1311/8270D		Analyst: CLS		
Surr: 2-Fluorobiphenyl	78.0	%REC		58.8-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM
Surr: 2-Fluorophenol	48.1	%REC		32.9-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM
Surr: 4-Terphenyl-d14	72.9	%REC		55.1-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM
Surr: Nitrobenzene-d5	85.7	%REC		61.8-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM
Surr: Phenol-d5	41.6	%REC		25.8-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM
TCLP VOLATILE ORGANIC COMPOUNDS			SW1311/8260B		Analyst: AS		
Benzene	ND	mg/L		0.050	0.500		05/07/11 3:24 PM
Carbon tetrachloride	ND	mg/L		0.050	0.500		05/07/11 3:24 PM
Chlorobenzene	ND	mg/L		0.050	100		05/07/11 3:24 PM
Chloroform	ND	mg/L		0.050	6.00		05/07/11 3:24 PM
1,1-Dichloroethane	ND	mg/L		0.050	0.700		05/07/11 3:24 PM
1,2-Dichloroethane	ND	mg/L		0.050	0.500		05/07/11 3:24 PM
Methyl ethyl ketone	ND	mg/L		0.500	200		05/07/11 3:24 PM
Tetrachloroethane	ND	mg/L		0.050	0.700		05/07/11 3:24 PM
Trichloroethene	ND	mg/L		0.050	0.500		05/07/11 3:24 PM
Vinyl chloride	ND	mg/L		0.050	0.200		05/07/11 3:24 PM
Surr: 1,2-Dichloroethane-d4	117	%REC		80-120	NA		05/07/11 3:24 PM
Surr: 4-Bromofluorobenzene	112	%REC		86-115	NA		05/07/11 3:24 PM
Surr: Dibromofluoromethane	107	%REC		80-120	NA		05/07/11 3:24 PM
Surr: Toluene-d8	87.4	%REC		80-110	NA		05/07/11 3:24 PM
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D		Analyst: CC		
Fecal Coliform	20,200	col/gram dry-wt		1,000	NA		05/05/11 9:30 AM
SPECIFIC OXYGEN CONSUMPTION RATE			SM2710 B		Analyst: JJ		
SOCR	4	(mg/g)/hr		NA	NA		05/05/11 1:30 PM
ANIONS BY IC, WATER SOLUBLE			SW9056		Analyst: CW		
Nitrogen, Nitrate	2.60	mg/Kg		2.00	NA		05/05/11 6:37 PM
AMMONIA NITROGEN			SM4500-NH3 BE		Analyst: JL		
Nitrogen, Ammonia	378	mg/Kg		40.0	NA		05/10/11 11:15 AM
TOTAL KJELDAHL NITROGEN (TKN)			SM4500-NORGC		Analyst: JL		
Nitrogen, Kjeldahl, Total	9,560	mg/Kg		400	NA		05/10/11 7:00 AM
CYANIDE, REACTIVE			SW 7.3.3.2		Analyst: PF		
Reactive Cyanide	ND	mg/Kg		5.0	NA		05/11/11 12:00 AM
SULFIDE, REACTIVE			SW 7.3.4.2		Analyst: PF		
Reactive Sulfide	ND	mg/Kg		50	NA		05/11/11 1:45 PM

Key: MCL Maximum Contaminant Level
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 NA Not Applicable
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Client Sample ID: SLUDGE

DateReceived 5/4/2011

Project:

Collection Date: 5/4/2011 9:45:00 AM

Site ID:

Matrix: SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	17.8	wt%		0.01	NA		05/06/11 9:21 AM
TOTAL VOLATILE SOLIDS			SM2540 G			Analyst: SF	
Total Volatile Solids	85.8	wt%		1.00	NA		05/06/11 5:03 PM
PH			SW9045D			Analyst: DSD	
pH	8.46	SU		NA	NA		05/05/11 4:00 PM

DEQ VALLEY

OCT 21 2013

To: _____

Date: _____

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
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ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
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* Value exceeds MCL or Regulatory Limits

Page 5 of 5

*Broadway Regional
Wastewater Treatment Facility*

15524 New Market Road
Timberville, VA 22853
Phone (540) 896-7351 Fax (540) 896-2982

October 2, 2013

Dawn Jeffries
Commonwealth of Virginia
Department of Environmental Quality
Valley Regional Office
4411 Early Road, P. O. Box 3000
Harrisonburg, VA 22801

RECEIVED
DEQ - Valley
OCT 02 2013

To: _____
FILE: _____

Re: Permit Reissuance Application
VPDES Permit No. VA 0090263, Rockingham County

Dear Ms. Jeffries,

Please find enclosed missing first two pages of Form 2A from our Permit Application Packet. We are also in the process of testing for the parameters listed in Part D of Form 2A. We will forward the results to you once the 3 sets of testing are completed.

Please let me know if you have any further questions or comments.

Regards,



Lee Grieco
Town of Broadway

FACILITY NAME AND PERMIT NUMBER:

Broadway Regional Wastewater Treatment Facility - VA0090263

Form Approved 1/14/99
OMB Number 2040-0086**FORM
2A
NPDES****NPDES FORM 2A APPLICATION OVERVIEW****APPLICATION OVERVIEW**

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

BASIC APPLICATION INFORMATION:

- A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.
- B. **Additional Application Information for Applicants with a Design Flow ≥ 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.
- C. **Certification.** All applicants must complete Part C (Certification).

SUPPLEMENTAL APPLICATION INFORMATION:

- D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):
 - 1. Has a design flow rate greater than or equal to 1 mgd,
 - 2. Is required to have a pretreatment program (or has one in place), or
 - 3. Is otherwise required by the permitting authority to provide the information.
- E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):
 - 1. Has a design flow rate greater than or equal to 1 mgd,
 - 2. Is required to have a pretreatment program (or has one in place), or
 - 3. Is otherwise required by the permitting authority to submit results of toxicity testing.
- F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:
 - 1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
 - 2. Any other industrial user that:
 - a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
 - b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
 - c. Is designated as an SIU by the control authority.
- G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

DEQ VALLEY

OCT 02 2013

To: _____

Date: _____

FACILITY NAME AND PERMIT NUMBER:

Broadway Regional Wastewater Treatment Facility - VA0090263

Form Approved 1/14/99
OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1. Facility Information.

Facility name Broadway Regional Wastewater Treatment Facility

Mailing Address 15524 New Market Road
Timberville, VA 22853

Contact person John Coffman

Title Wastewater Superintendent

Telephone number (540) 896-7351

Facility Address 15524 New Market Road
(not P.O. Box) Timberville, VA 22853

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name Town of Broadway

Mailing Address 116 Broadway Avenue
Broadway, VA 22815

Contact person Kyle O'Brien

Title Town Manager

Telephone number (540) 896-5152

Is the applicant the owner or operator (or both) of the treatment works?

☒ owner ☒ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

☐ facility ☒ applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES VA0090263 PSD _____

UIC _____ Other _____

RCRA _____ Other _____

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
<u>Broadway/Timberville</u>	<u>3700/2522</u>	<u>Separate/Separate</u>	<u>Municipal/Municipal</u>
<u>New Market</u>	<u>2146</u>	<u>Separate</u>	<u>Municipal</u>
<u>Cargill/Pilgrim's Pride</u>	<u>NA/NA</u>	<u>Separate/Separate</u>	<u>Private/Private</u>
Total population served <u>8368</u>			

DEQ VALLEY

To: _____

Date: _____

BROADWAY WASTEWATER FACILITY

15524 New Market Rd, Timberville, VA 22853
Phone (540) 896-7351 Fax (540) 896-2762

September 20, 2013

RECEIVED
DEQ - Valley
SEP 23 2013

Ms. Dawn Jeffries
Department of Environmental Quality
Valley Regional Office
P.O. Box 3000
4411 Early Road
Harrisonburg, Virginia 22801

To: _____
FILE: _____

Re: Submittal of Permit Reissuance Application for the Broadway Regional Wastewater Treatment Facility. Permit Number: VA 0090263

Dear Ms. Jeffries:

Broadway Wastewater is pleased to submit the Permit Reissuance application for your approval. Included in this packet are the EPA Form 3510-2A, VPDES Sewage Sludge Permit Application Form, VPDES Application Addendum, Permit Billing Information Form, Public Notice Billing Information Form, and responses to questions from the Virginia Pollution Abatement Permit Application Form C.

A waiver of the parameters for Part D of EPA Form 3510-2A covering Expanded Effluent Testing Data is requested. Many of these parameters have been tested for and the results are included in Part D. All parameters in this section that have water quality standards were previously tested for and found not to exceed established standards, in addition no new significant industrial users have been added to the system since these tests were run. Also, Appendix D shows recent tests performed for many of the parameters listed in Part D of EPA Form 3510-2A with no high levels reported.

A change in frequency of CBOD, Ammonia-N, E. Coli, and Oil and Grease testing is requested, as well as an increase in the maximum amount of water applied through irrigation on a single pass across the field.

The old permit requires testing of CBOD and Ammonia-N every day of the week which presents some difficulties with cost and holding time constraints, especially on Holidays. Due to time

BROADWAY WASTEWATER FACILITY

15524 New Market Rd, Timberville, VA 22853
Phone (540) 896-7351 Fax (540) 896-2782

constraints with CBOD 48-hour holding time and cost concerns, we request that the frequency of testing for CBOD and Ammonia-N be reduced to three days per week. There haven't been any violations of CBOD limits since the issuance of the previous permit in October of 2009. There was one violation of Ammonia-N limits in September of 2012. River discharge had been cut off through most of July and all of August to facilitate repairs to the baffle curtains. When river discharge began again in September, problems treating Ammonia were noticed and river discharge was cut off again while the Treatment System returned to normal. We feel that this was an isolated incident due to the irregular operation while the baffle curtains were being repaired in the preceding months. BRWWTF staff is vigilant in inspecting the Ammonia treatment and the facility is capable of diverting discharge to the large Storage Reservoir if Ammonia levels begin to rise.

The old permit requires testing of E. Coli three days per week in 48 hour intervals. We request that the frequency be changed to once per week in the new permit. There have been no violations of E. Coli limits since the issuance of the previous permit in October of 2009.

The old permit requires testing of Oil and Grease twice per month. We request that the frequency be changed to once per month. There are no limits for Oil and Grease established in the permit and there haven't been any Oil and Grease results above the quantification limit of 5 mg/L since the issuance of the previous permit.

Lastly, BRWWTF would like to request a change in the maximum allowable irrigation in a single irrigation rig pass. Currently, we are limited to an application of 0.50 inches of irrigation per irrigation rig pass across a given field and we request an increase to a maximum 1.0 inches per pass. We are already limited by the soil moisture graphs to maintain irrigation below the soil saturation point and feel that only being able to irrigate 0.50 inches in hot conditions seriously limits the amount of water that is actually made available to the crops due to evaporation. After talking with the farmers, they also would like to see us go to 1.0 inches per pass because the leaves and tassles of the corn and soybeans would not stay wet so long by putting the same amount of water on the fields with less passes. Also, by allowing more irrigation during a single pass, the wear and tear on the irrigation rigs would be greatly reduced as they would not have to complete two passes to apply the same amount of water.

If you need more information or have questions, please call us at 540-896-7351.

Thank you for your continuing cooperation.

Sincerely,
Broadway Wastewater

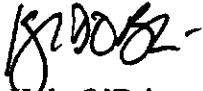
DEQ VALLEY

SEP 23 2013

To: _____
Date: _____

BROADWAY WASTEWATER FACILITY

15524 New Market Rd, Timberville, VA 22853
Phone (540) 896-7351 Fax (540) 896-2782


Kyle O'Brien
Town Manager

DEQ VALLEY

SEP 23 2013

To: _____

D _____

FACILITY NAME AND PERMIT NUMBER:

Form Approved 1/14/99
OMB Number 2040-0086

Broadway Regional Wastewater Treatment Facility - VA0090263

A.6. Indian Country.

- a. Is the treatment works located in Indian Country?

☐ Yes ☒ No

- b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

☐ Yes ☒ No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

- a. Design flow rate
- 2.923
- mgd

	Two Years Ago	Last Year	This Year
b. Annual average daily flow rate	<u>1.328</u>	<u>1.480</u>	<u>1.556</u> mgd
c. Maximum daily flow rate	<u>3.043</u>	<u>2.634</u>	<u>2.558</u> mgd

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

<input checked="" type="checkbox"/> Separate sanitary sewer	<u>100</u> %
<input type="checkbox"/> Combined storm and sanitary sewer	<u>0</u> %

A.8. Discharges and Other Disposal Methods.

- a. Does the treatment works discharge effluent to waters of the U.S.?
- ☒
- Yes
- ☐
- No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent	<u>1</u>
ii. Discharges of untreated or partially treated effluent	<u>0</u>
iii. Combined sewer overflow points	<u>0</u>
iv. Constructed emergency overflows (prior to the headworks)	<u>0</u>
v. Other <u>Irrigation of Treated Effluent</u>	<u>9 Irrigation Rigs</u>

- b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.?
- ☐
- Yes
- ☒
- No

If yes, provide the following for each surface impoundment:

Location: _____

Annual average daily volume discharged to surface impoundment(s) _____ mgd

Is discharge ☐ continuous or ☐ intermittent?

- c. Does the treatment works land-apply treated wastewater?
- ☒
- Yes
- ☐
- No

If yes, provide the following for each land application site:

Location: 10 Fields Irrigated with 9 Rigs (See Additional Information for location, acreage, and volume applied)

Number of acres: _____

Annual average daily volume applied to site: _____ Mgd

Is land application ☐ continuous or ☒ intermittent?

- d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works?
- ☐
- Yes
- ☒
- No

DEQ VALLEY

SEP 23 2013

To: _____

FACILITY NAME AND PERMIT NUMBER:

Broadway Regional Wastewater Treatment Facility - VA0090263

Form Approved 1/14/99
OMB Number 2040-0086

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide:

Transporter name: _____

Mailing Address: _____

Contact person: _____

Title: _____

Telephone number: _____

For each treatment works that receives this discharge, provide the following:

Name: _____

Mailing Address: _____

Contact person: _____

Title: _____

Telephone number: _____

If known, provide the NPDES permit number of the treatment works that receives this discharge.

Provide the average daily flow rate from the treatment works into the receiving facility.

_____ NA mgd

- e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)?

_____ Yes

✓ No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method: _____

Is disposal through this method

_____ continuous or _____ intermittent?

DEQ VALLEY

SEP 23 2013

To: _____

Date: _____

FACILITY NAME AND PERMIT NUMBER:

Broadway Regional Wastewater Treatment Facility - VA0090263

Form Approved 1/14/99
OMB Number 2040-0086

WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. If you answered "no" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

a. Outfall number 003

b. Location

(City or town, if applicable)	<u>22853</u>
<u>Rockingham County</u>	(Zip Code)
(County)	<u>Virginia</u>
<u>North 38 degrees 38.197 minutes</u>	(State)
(Latitude)	<u>West 78 degrees 45.188 minutes</u>
	(Longitude)

c. Distance from shore (if applicable)

NA ft.

d. Depth below surface (if applicable)

NA ft.

* Depth + Distance Depend
on River Flow

e. Average daily flow rate

1.556 mgd

f. Does this outfall have either an intermittent or a periodic discharge?

☒ Yes ☐ No (go to A.9.g.)

If yes, provide the following information:

Number of times per year discharge occurs:

Low flow Augmentation is required and flow is occasionally
halted to recharge storage pond for irrigation water.
300-365

Average duration of each discharge:

24-hour

Average flow per discharge:

1.556 mgd

Months in which discharge occurs:

All

g. Is outfall equipped with a diffuser?

☐ Yes ☒ No

A.10. Description of Receiving Waters.

a. Name of receiving water North Fork of Shenandoah River

b. Name of watershed (if known)

Chesapeake Bay

United States Soil Conservation Service 14-digit watershed code (if known):

Unknown

c. Name of State Management/River Basin (if known):

Shenandoah River/Potomac River

United States Geological Survey 8-digit hydrologic cataloging unit code (if known):

Unknown

d. Critical low flow of receiving stream (if applicable):

acute NA cfs chronic NA cfse. Total hardness of receiving stream at critical low flow (if applicable): NA mg/l of CaCO₃

DEQ VALLEY

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Broadway Regional Wastewater Treatment Facility - VA0090263

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A.11. Description of Treatment.

- a. What levels of treatment are provided? Check all that apply.

☒ Primary ☒ Secondary
☒ Advanced ☒ Other. Describe: 5-stage BNR w/ Denitrification Filters & UV disinfection

- b. Indicate the following removal rates (as applicable):

Design BOD₅ removal or Design CBOD₅ removal 99.5 %
 Design SS removal 97.6 %
 Design P removal 96.9 %
 Design N removal 98.1 %
 Other _____ %

- c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

Ultraviolet Light

If disinfection is by chlorination, is dechlorination used for this outfall?

☐ Yes ☐ No

- d. Does the treatment plant have post aeration?

☒ Yes ☐ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 003

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.76	s.u.			
pH (Maximum)	7.86	s.u.			
Flow Rate	2.558	MGD	1.556	MGD	365
Temperature (Winter)	20.9	Celsius	13.7	Celsius	181
Temperature (Summer)	30.2	Celsius	24.5	Celsius	135

* For pH please report a minimum and a maximum daily value

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		

CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.

BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5	***	See Additional Information				
	CBOD-5	72.0	mg/L	2.88	mg/L	316	SM5210 B 2 mg/L
FECAL COLIFORM - E. Coli		2420	n/cml	25.7	n/cml	136	COLILERT 1 n/cml
TOTAL SUSPENDED SOLIDS (TSS)		11.0	mg/L	5.55	mg/L	11	SM2540 D 1.0 mg/L

END OF PART A.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

SEP 23 2013

To:

FACILITY NAME AND PERMIT NUMBER:

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BASIC APPLICATION INFORMATION

PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

B.1. Inflow and Infiltration. Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

_____ gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

See Additional Information for description of I&I issues.

B.2. Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

- The area surrounding the treatment plant, including all unit processes. *See Appendix A*
- The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
- Each well where wastewater from the treatment plant is injected underground.
- Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
- Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.
- If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g., chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram. *See Additional Information + Appendix C*

B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ☒ Yes ☐ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: Agri-Sludge, Inc.Mailing Address: 8047 State Route 754. Shreve, OH 44676Telephone Number: (330) 567-2500Responsibilities of Contractor: Dredging sludge from treatment cells and land application of pressed sludge.

B.5. Scheduled Improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

- List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.
No planned improvements are scheduled at this time.
- Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.
☐ Yes ☐ No

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- c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

- d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule	Actual Completion
	MM/DD/YYYY	MM/DD/YYYY
- Begin construction	___/___/___	___/___/___
- End construction	___/___/___	___/___/___
- Begin discharge	___/___/___	___/___/___
- Attain operational level	___/___/___	___/___/___

- e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ☐ Yes ☐ No

Describe briefly: _____

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 003

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	1.45	mg/L	0.10	mg/L	316	EPA350.1	0.10 mg/L
CHLORINE (TOTAL RESIDUAL, TRC)	NA	NA	NA	NA	NA	NA	NA
DISSOLVED OXYGEN	10.55	mg/L	7.47	mg/L	316	YSI DO55	0.01 mg/L
TOTAL KJELDAHL NITROGEN (TKN)	3.38	mg/L	0.89	mg/L	45	E351.2	0.50 mg/L
NITRATE PLUS NITRITE NITROGEN	4.10	mg/L	0.86	mg/L	45	SM4110B	0.10 mg/L
OIL and GREASE	<5.0	mg/L	<5.0	mg/L	22	EPA1664A	5.0 mg/L
PHOSPHORUS (Total)	1.06	mg/L	0.26	mg/L	46	SM4500-P BE	0.05 mg/L
TOTAL DISSOLVED SOLIDS (TDS)	745	mg/L	630	mg/L	3	SM2540 C	10 mg/L
OTHER							

END OF PART B.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

DEQ VALLEY

SEP 23 2013

To: _____

Date: _____

FACILITY NAME AND PERMIT NUMBER:

Broadway Regional Wastewater Treatment Facility - VA0090263

Form Approved 1/14/99
OMB Number 2040-0086**BASIC APPLICATION INFORMATION****PART C. CERTIFICATION**

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

☒ Basic Application Information packet

Supplemental Application Information packet:

☒ Part D (Expanded Effluent Testing Data)☒ Part E (Toxicity Testing: Biomonitoring Data)☒ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)☐ Part G (Combined Sewer Systems)**ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title Kyle D. O'Brien Town ManagerSignature Telephone number (540) 896-5152Date signed 9/20/13

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:**DEQ VALLEY**

SEP 23 2013

To: _____

Date: _____

FACILITY NAME AND PERMIT NUMBER:

Broadway Regional Wastewater Treatment Facility - VA0090263

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SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: 003 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY	<0.02	mg/L			<0.02	mg/L			1	E200.7	0.0200 mg/L
ARSENIC	<0.02	mg/L			<0.02	mg/L			1	E200.7	0.0200 mg/L
BERYLLIUM											
CADMIUM	<1.0	ug/L			<1.0	ug/L			1	E200.7	1.0 ug/L
CHROMIUM	<0.01	mg/L			<0.01	mg/L			1	E200.7	0.010 mg/L
COPPER	<5.0	ug/L			<5.0	ug/L			1	E200.7	5.0 ug/L
LEAD	<0.01	mg/L			<0.01	mg/L			1	E200.7	0.010 mg/L
MERCURY	<1.0	ug/L			<1.0	ug/L			1	E245.1	1.0 ug/L
NICKEL	<5.0	ug/L			<5.0	ug/L			1	E200.7	5.0 ug/L
SELENIUM	<0.02	mg/L			<0.02	mg/L			1	E200.7	0.0200 mg/L
SILVER	<5.0	ug/L			<5.0	ug/L			1	E200.7	5.0 ug/L
THALLIUM	<0.01	mg/L			<0.01	mg/L			1	E200.7	0.0100 mg/L
ZINC	<0.02	mg/L			<0.02	mg/L			1	E200.7	0.0200 mg/L
CYANIDE	<0.02	mg/L			<0.02	mg/L			1	E335.4	0.020 mg/L
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (AS CaCO ₃)	489	mg/L			489	mg/L			1	SM2340 B	1.00 mg/L
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											

DEQ VALLEY

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To: _____

FACILITY NAME AND PERMIT NUMBER:

Broadway Regional Wastewater Treatment Facility - VA0090263

Form Approved 1/14/99
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Outfall number: 003 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN	<50.0	ug/L			<50.0	ug/L			1	E624	50.0 ug/L
ACRYLONITRILE	<50.0	ug/L			<50.0	ug/L			1	E624	50.0 ug/L
BENZENE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
BROMOFORM	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
CARBON TETRACHLORIDE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
CLOROBENZENE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
CHLORODIBROMO-METHANE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
CHLOROETHANE											
2-CHLORO-ETHYL VINYL ETHER											
CHLOROFORM	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
DICHLOROBROMO-METHANE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
1,1-DICHLOROETHANE											
1,2-DICHLOROETHANE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
TRANS-1,2-DICHLORO-ETHYLENE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
1,1-DICHLOROETHYLENE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
1,2-DICHLOROPROPANE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
1,3-DICHLORO-PROPYLENE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
ETHYLBENZENE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
METHYL BROMIDE											
METHYL CHLORIDE											
METHYLENE CHLORIDE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
1,1,2,2-TETRACHLORO-ETHANE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
TETRACHLORO-ETHYLENE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
TOLUENE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L

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FACILITY NAME AND PERMIT NUMBER:

Form Approved 1/14/99
OMB Number 2040-0066

Broadway Regional Wastewater Treatment Facility - VA0090263

Outfall number: 003 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
1,1,1-TRICHLOROETHANE											
1,1,2-TRICHLOROETHANE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
TRICHLOROETHYLENE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L
VINYL CHLORIDE	<5.0	ug/L			<5.0	ug/L			1	E624	5.0 ug/L

Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.

--	--	--	--	--	--	--	--	--	--	--	--

ACID-EXTRACTABLE COMPOUNDS

P-CHLORO-M-CRESOL											
2-CHLOROPHENOL	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
2,4-DICHLOROPHENOL	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
2,4-DIMETHYLPHENOL	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
4,6-DINITRO-O-CRESOL											
2,4-DINITROPHENOL	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
2-NITROPHENOL											
4-NITROPHENOL											
PENTACHLOROPHENOL	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
PHENOL	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
2,4,6-TRICHLOROPHENOL	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L

Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.

--	--	--	--	--	--	--	--	--	--	--	--

BASE-NEUTRAL COMPOUNDS

ACENAPHTHENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
ACENAPHTHYLENE											
ANTHRACENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
BENZIDINE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
BENZO(A)ANTHRACENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
BENZO(A)PYRENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L

FACILITY NAME AND PERMIT NUMBER:

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Outfall number: 003 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
3,4 BENZO-FLUORANTHENE											
BENZO(GH)PERYLENE											
BENZO(K)FLUORANTHENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
BIS (2-CHLOROETHOXY) METHANE											
BIS (2-CHLOROETHYL)-ETHER	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
BIS (2-CHLOROISO-PROPYL) ETHER	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
BIS (2-ETHYLHEXYL) PHTHALATE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
4-BROMOPHENYL PHENYL ETHER											
BUTYL BENZYL PHTHALATE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
2-CHLORONAPHTHALENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
4-CHLOROPHENYL PHENYL ETHER											
CHRYSENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
DI-N-BUTYL PHTHALATE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
DI-N-OCTYL PHTHALATE											
DIBENZO(A,H) ANTHRACENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
1,2-DICHLOROBENZENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
1,3-DICHLOROBENZENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
1,4-DICHLOROBENZENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
3,3-DICHLOROBENZIDINE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
DIETHYL PHTHALATE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
DIMETHYL PHTHALATE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
2,4-DINITROTOLUENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
2,6-DINITROTOLUENE											
1,2-DIPHENYLHYDRAZINE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L

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Outfall number: 003 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
FLUORENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
HEXACHLOROBENZENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
HEXACHLOROBUTADIENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
HEXACHLOROCYCLO-PENTADIENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
HEXACHLOROETHANE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
INDENO(1,2,3-CD)PYRENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
ISOPHORONE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
NAPHTHALENE											
NITROBENZENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
N-NITROSODI-N-PROPYLAMINE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
N-NITROSODI- METHYLAMINE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
N-NITROSODI-PHENYLAMINE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
PHENANTHRENE											
PYRENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L
1,2,4-TRICHLOROBENZENE	<10.5	ug/L			<10.5	ug/L			1	E625	10.5 ug/L

Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.

Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.

END OF PART D.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

DEQ VALLEY

SEP 23 2013

To: _____
Date: _____

FACILITY NAME AND PERMIT NUMBER:

Form Approved 1/14/99
OMB Number 2040-0086

Broadway Regional Wastewater Treatment Facility - VA0090263

SUPPLEMENTAL APPLICATION INFORMATION

PART E. TOXICITY TESTING DATA

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

E.1. Required Tests.

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

41 chronic 25 acute

See Additional Information for
more specific individual
tests. All results are on

Alb at
DEQ

E.2. Individual Test Data. Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

Test number: _____ Test number: _____ Test number: _____

a. Test information.

For All Tests ↓

Test species & test method number	Caridaphnia dubia + Flathead minnow		
Age at initiation of test			
Outfall number			
Dates sample collected			
Date test started			
Duration			

b. Give toxicity test methods followed.

Manual title			
Edition number and year of publication			
Page number(s)			

c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.

24-Hour composite	24-hr composites		
Grab			

d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each)

Before disinfection			
After disinfection	After Disinfection → After 2010		
After dechlorination	or After Dechlorination → 2010 + before		

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FACILITY NAME AND PERMIT NUMBER:

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Test number: _____

Test number: _____

Test number: _____

e. Describe the point in the treatment process at which the sample was collected.

Sample was collected:

Post Aeration Basin

f. For each test, include whether the test was intended to assess chronic toxicity, acute toxicity, or both.

Chronic toxicity

Multiple tests for

Acute toxicity

both Chronic + Acute

g. Provide the type of test performed.

Static

Static-renewal

Flow-through

h. Source of dilution water. If laboratory water, specify type; if receiving water, specify source.

Laboratory water

Receiving water

i. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.

Fresh water

Salt water

j. Give the percentage effluent used for all concentrations in the test series.

k. Parameters measured during the test. (State whether parameter meets test method specifications)

pH

Salinity

Temperature

Ammonia

Dissolved oxygen

l. Test Results.

Acute:

Percent survival in 100%
effluent

%

%

%

LC₅₀

95% C.I.

%

%

%

Control percent survival

%

%

%

Other (describe)

DEQ VALLEY

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To: _____

Date: _____

FACILITY NAME AND PERMIT NUMBER: Broadway Regional Wastewater Treatment Facility - VA0090263
--

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Chronic:			
NOEC	%	%	%
IC ₂₅	%	%	%
Control percent survival	%	%	%
Other (describe)			

m. Quality Control/Quality Assurance.			
Is reference toxicant data available?			
Was reference toxicant test within acceptable bounds?			
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			

E.3. Toxicity Reduction Evaluation. Is the treatment works involved in a Toxicity Reduction Evaluation?

____ Yes ☒ No If yes, describe: _____

E.4. Summary of Submitted Biomonitoring Test Information. If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date submitted: _____ (MM/DD/YYYY)

Summary of results: (see instructions) See Additional Information

END OF PART E.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.

DEQ VALLEY

SEP 23 2013

To: _____
Date: _____

FACILITY NAME AND PERMIT NUMBER:

Broadway Regional Wastewater Treatment Facility - VA0090263

Form Approved 1/14/99
OMB Number 2040-0086

SUPPLEMENTAL APPLICATION INFORMATION

PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

GENERAL INFORMATION:

F.1. Pretreatment Program. Does the treatment works have, or is it subject to, an approved pretreatment program?

☒ Yes ☐ No

F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. 2b. Number of CIUs. 0

SIGNIFICANT INDUSTRIAL USER INFORMATION:

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

F.3. Significant Industrial User Information. Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: Cargill Meat Solutions, Corporation LLCMailing Address: 480 Co-op Drive
Timberville, VA 22853

F.4. Industrial Processes. Describe all of the industrial processes that affect or contribute to the SIU's discharge.

Meat Processing Plant

F.5. Principal Product(s) and Raw Material(s). Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): Finished Meat ProductsRaw material(s): Turkey, Chicken, Pork, Beef

F.6. Flow Rate.

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

112,000 gpd (☐ continuous or ☒ intermittent) Monday - Friday with clean-up on weekends.

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

0 gpd (☐ continuous or ☐ intermittent)

F.7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local limits ☒ Yes ☐ Nob. Categorical pretreatment standards ☐ Yes ☒ No

If subject to categorical pretreatment standards, which category and subcategory?

DEQ VALLEY

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To: _____

Date: _____

Broadway Regional Wastewater Treatment Facility - VA0090263

F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU. Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

☒ Yes ☐ No

If yes, describe each episode.

Quaternary Ammonia from the plant has caused some problems depleting the treatment bugs.

F.9. RCRA Waste. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe? ☐ Yes ☒ No (go to F.12.)

 Truck Rail Dedicated Pipe

<u>EPA Hazardous Waste Number</u>	<u>Amount</u>	<u>Units</u>
-----------------------------------	---------------	--------------

F.12. Remediation Waste. Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

 Yes (complete F.13 through F.15.)

☒ **No**

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

F.13. Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

F.14. Pollutants. List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

 Yes **No**

If yes, describe the treatment (provide information about the removal efficiency):

b. Is the discharge (or will the discharge be) continuous or intermittent?

☐ Continuous ☐ Intermittent If intermittent, describe discharge schedule.

DEQ VALLEY

SEP 23 2013

To:

Date _____

END OF PART F.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:

Broadway Regional Wastewater Treatment Facility - VA0090263

Form Approved 1/14/99
OMB Number 2040-0086

SUPPLEMENTAL APPLICATION INFORMATION

PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

GENERAL INFORMATION:

F.1. Pretreatment Program. Does the treatment works have, or is it subject to, an approved pretreatment program?

☒ Yes ☐ No

F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works.

- a. Number of non-categorical SIUs. 2
- b. Number of CIUs. 0

SIGNIFICANT INDUSTRIAL USER INFORMATION:

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

F.3. Significant Industrial User Information. Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: Pilgrim's Pride Corporation of VAMailing Address: 330 Co-op Drive
Timberville, VA 22853

F.4. Industrial Processes. Describe all of the industrial processes that affect or contribute to the SIU's discharge.

Poultry Processing and Kill Plant

F.5. Principal Product(s) and Raw Material(s). Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): PoultryRaw material(s): Chickens

F.6. Flow Rate.

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

791,500 gpd (☐ continuous or ☒ intermittent) Monday-Friday with some weekend shifts + clean-up water on weekends.

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

0 gpd (☐ continuous or ☐ intermittent)

F.7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

- a. Local limits ☒ Yes ☐ No
- b. Categorical pretreatment standards ☐ Yes ☒ No

If subject to categorical pretreatment standards, which category and subcategory?

DEQ VALLEY

SEP 23 2013

To: _____
Date: _____

Broadway Regional Wastewater Treatment Facility - VA0090263

Form Approved 1/14/99
OMB Number 2040-0085

✓ Yes No If yes, describe each episode.

Heavy Loading of Ammonia from rendering has overloaded the treatment system on occasion.

F.9. RCRA Waste. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe? ☐ Yes ☒ No (go to F.12.)

Truck	Rail	Dedicated Pipe
-------	------	----------------

<u>EPA Hazardous Waste Number</u>	<u>Amount</u>	<u>Units</u>
-----------------------------------	---------------	--------------

 Yes (complete F.13 through F.15.)

✓ No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

Yes No

If yes, describe the treatment (provide information about the removal efficiency):

b. Is the discharge (or will the discharge be) continuous or intermittent?

Continuous

Intermittent

If intermittent, describe discharge schedule.

DEQ VALLEY

SEP 23 2013

To:_____

Date: _____

END OF PART F.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

VPDES Permit Application Addendum

1. Entity to whom the permit is to be issued Town of Broadway
Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. Is this facility located within city or town boundaries? Y ☒ N
Include a topographic map identifying the location of the facility, the property boundaries, and the discharge point.

3. What is the tax map parcel number for the land where this facility is located? 40 - (A) - L 82

4. For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities? 0

5. **ALL FACILITIES:** What is the design average flow of this facility? 2.923 MGD
Industrial facilities: What is the max. 30-day avg. production level (include units)? NA

In addition to the above design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Y ☒ N

If "Yes", please specify the other flow tiers (in MGD) or production levels: _____
Please consider: Is your facility's design flow considerably greater than your current flow? Do you plan to expand operations during the next five years?

6. Nature of operations generating wastewater:
Municipal wastewater, as well as initial and further processing poultry plant wastewater
45 % of flow from domestic connections/sources
Number of private residences to be served by the wastewater treatment facilities: 0 1-49 ☒ 50 or more
55 % of flow from non-domestic connections/sources

7. Mode of discharge: Continuous ☒ Intermittent Seasonal
Describe frequency and duration of intermittent or seasonal discharges:
Discharge is required for low flow augmentation but occasionally diverted to storage pond for irrigation water

8. Identify the characteristics of the receiving stream at the point just above the facility's discharge point:
☒ Permanent stream, never dry
☐ Intermittent stream, usually flowing, sometimes dry
☐ Ephemeral stream, wet-weather flow, often dry
☐ Effluent-dependent stream, usually or always dry
☐ Lake or pond at or below the discharge point
☐ Other: _____

9. Approval Date(s):
O & M Manual 3/9/11 Sludge/Solids Management Plan 3/9/11

Have there been any changes in your operations or procedures since the above approval dates? Y / N

10. Date that a copy of the application was sent to the Virginia Department of Health? Only submitted to DEQ
They said they would forward to VDH.

DEQ VALLEY

SEP 23 2013

To: _____
Date: _____

VPDES/VPA Permit Billing Information Form
for Annual Maintenance Fee

Facility Name: Broadway Regional Wastewater Treatment Facility

Permit Number: VA 0090263

Owner Name: Town of Broadway

Owner Address: PO Box 156
116 Broadway Ave
Broadway, VA 22815

Billing Contact Name: Kyle O'Brien

Title: Town Manager

Phone Number: 540 896-5152

E-Mail Address: kobrien@town.broadway.va.us

DEQ VALLEY

SEP 23 2013

To: _____
Date: _____

PUBLIC NOTICE BILLING INFORMATION

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in The Daily News Record in accordance with 9 VAC 25-31-290.C.2.

Agent/Department to be billed: Broadway Regional Wastewater Treatment Facility

Owner: Town of Broadway

Agent/Department Address: P.O. Box 156
116 Broadway Avenue
Broadway, VA 22815

Agent's Telephone No.: 540 896-7351

Printed Name: John Coffman

Authorizing Agent – Signature: John Coffman

Date: 9/20/13

VPDES Permit No. VA0090263
Town of Broadway Regional WWTF

DEQ VALLEY

SEP 23 2013

To: _____
Date: _____

VPDES Sewage Sludge Permit Application for Permit Reissuance

Instructions

WHO MUST SUBMIT THE APPLICATION - All facilities with a current VPDES Permit that authorizes the discharge of treated sewage wastewater that are applying for reissuance must complete and submit this application.

Part 1 is general information to be provided by all facilities.

Part 2 must be completed by all facilities that generate Class A or Class B biosolids that are land applied.

Part 3 must be completed by all facilities that land apply Class B biosolids.

Part 1 - Sludge Disposal Management (To be completed by all facilities)

Facility Name: Broadway Regional Wastewater Treatment Facility VPDES Permit No: VA0090263

1. Shipment Off Site for Treatment or Blending

Is sewage sludge from your facility sent to another facility that provides treatment or blending?

☐ Yes ☒ No

If you send sewage sludge to more than one facility, attach additional sheets as necessary.

Shipment off site is: ☐ The primary method of sludge disposal ☐ A back up method of sludge disposal

a. Receiving Facility Name _____

b. Receiving Facility VPDES Permit No. _____

c. Include an acceptance letter from the Receiving Facility.

d. Receiving Facility's ultimate disposal method for sewage sludge _____

2. Disposal in a Municipal Solid Waste Landfill

Is sewage sludge from your facility placed in a municipal solid waste landfill?

☐ Yes ☒ No

If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.

Landfilling is: ☐ The primary method of sludge disposal ☐ A back up method of sludge disposal

a. Landfill Name _____

b. Landfill Permit No. _____

c. Include an acceptance letter from the landfill.

3. Incineration

Is sewage sludge from your facility fired in a sewage sludge incinerator?

☐ Yes ☒ No

Incineration is: ☐ The primary method of sludge disposal ☐ A back up method of sludge disposal

a. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?

☐ Yes ☐ No

If yes, provide the Air Registration No. _____

If no, complete items b - d for each incinerator that you do not own or operate.

b. Facility Name _____

c. Air Registration No. _____

d. Include an acceptance letter from the Incinerator.

4. Class A Biosolids

Do you produce Class A biosolids for land application or distribution and marketing? If yes, complete Part 2.

☐ Yes ☒ No

Are Class A biosolids from your facility land applied in bulk?

☐ Yes ☐ No

Do you sell or give away Class A biosolids in a bag or other container for application to the land? If yes, provide the VDACS certification number? _____

☐ Yes ☐ No

5. Class B Biosolids

Do you produce Class B biosolids? If yes, complete Part 2.

☒ Yes ☐ No

Are Class B biosolids from your facility land applied under the authorization of this VPDES Permit? If yes, complete Part 3.

☐ Yes ☒ No

6. Land Application Under a Separate Permit

Are biosolids from your facility land applied under the authorization of a permit other than your VPDES Permit?

☒ Yes ☐ No

Biosolids are land applied under the authorization of a ☒ VPA permit ☐ Another VPDES Permit ☐ Out of State

Complete items a - c for each VPA permit authorized to land apply biosolids from your facility.

a. Permittee Name

Agri-Sludge, Inc.

b. Permit No.

VPA 01584

c. Include copy of any information you provide to the Receiving VPDES or VPA Permittee to comply with the "notice and necessary information" requirement of 9VAC25-31-530 F.

See Appendix B

DEQ VALLEY

VPDES Sewage Sludge Permit Application for Permit Reissuance

Part 2 – Biosolids Characterization (To be completed by all facilities that generate biosolids that are land applied.)

1. Have there been changes to sludge treatment processes or storage facilities since the previous permit issuance/reissuance? ☒ Yes ☐ No
2. Do the biosolids generated under this permit that will be land applied meet one of the Class A pathogen requirements in 9VAC25-31-710 A 3 through A 8 or Class B pathogen requirements in 9VAC25-31-710 B 1 through B 4? ☒ Yes ☐ No
See Additional Information
 Identify the pathogen reduction option utilized to demonstrate compliance with the pathogen reductions requirements and provide the data that demonstrate compliance with the applicable alternative. B1: 7 Fecal Tests
3. Do the biosolids generated under this permit that will be land applied meet one of the vector attraction reduction requirements in 9VAC25-31-720 B 1 through B 10? ☒ Yes ☐ No
 Identify the vector attraction reduction option utilized to demonstrate compliance with the vector attraction reductions requirements and provide the data that demonstrate compliance with the applicable alternative. B4: SOURS testing
4. Do the biosolids to be land applied meet the ceiling/pollutant concentrations in 9VAC25-31-540 B? ☒ Yes ☐ No
5. Has data from the most recent 3 samples for pH (S.U.), Percent Solids (%), Ammonium Nitrogen (mg/kg), Nitrate Nitrogen (mg/kg), Total Kjeldahl Nitrogen (mg/kg), Total Phosphorus (mg/kg), Total Potassium (mg/kg), Alkalinity as CaCO₃ (mg/kg), Arsenic (mg/kg), Cadmium (mg/kg), Copper (mg/kg), Lead (mg/kg), Mercury (mg/kg), Nickel (mg/kg), Selenium (mg/kg), Zinc (mg/kg) been submitted to DEQ? The samples shall be no more than 4½ years old and each sampling date shall be at least 1 month apart. ☒ Yes ☐ No
See Appendix B
 If no, provide the data with this application.

Part 3 – Land Application of Class B Biosolids (To be completed by all facilities that land apply Class B biosolids.)

1. Provide to DEQ and to each locality in which biosolids are to be land applied, written evidence of financial responsibility. Evidence of financial responsibility shall be provided in accordance with 9VAC25-31-100 P 9.
2. For each site, provide a properly completed landowner agreement for each landowner, using the most current Land Application Agreement - Biosolids Form (VPDES Sewage Sludge Permit Application Form – Attachment to Section C).
3. Are any new land application fields proposed at this reissuance? ☐ Yes ☐ No
 If yes, contact the DEQ Regional Office for additional submittal requirements.
4. For the currently permitted land application fields, are the previously submitted site booklets, maps and acreage accurate. ☐ Yes ☐ No
 If no, contact the DEQ Regional Office for additional submittal requirements.
5. Does the facility's Biosolids Management Plan on file with DEQ include the following minimum information? ☐ Yes ☐ No
 - a. An odor control plan that addresses the abatement of odors resulting from the storage and/or land application of biosolids.
 - b. A description of the transport vehicles to be used.
 - c. Procedures for biosolids offloading at the land application site including spill prevention, cleanup (including vehicle cleaning), field reclamation, and emergency notification and cleanup measures.
 - d. A description of the land application equipment including procedures for calibrating equipment to ensure uniform distribution and appropriate loading rates.
 - e. Procedures used to ensure that land application activities address notification requirements, signage requirements, slope restrictions, operation limitations during periods of inclement weather, soil pH requirements, buffer zone requirements, and site restrictions.
 - f. Any other information necessary to ensure compliance with the requirements of the Biosolids Program of the VPDES Permit Regulation (9VAC25-31-420 through 720).

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title Kyle D O'Brien Broadway Town Manager

Signature *Kyle D O'Brien*

Telephone number / Email (540) 896-5152 / kdobrien@town.broadway.va.us

Date signed 9/20/13

(Based on a review of this information, it may be necessary to submit additional information to meet other legal or technical review requirements.)

DEQ VALLEY

Reissuance of VPDES Permit No. VA 0090263—BWTF
**Virginia Pollution Abatement Permit Application
Form C**

Part C-1 General Information

1. Facility Name

Broadway Regional Wastewater Treatment Facility

2. Sources of Waste

a. Facility Operations/Waste Production

The Broadway Regional Wastewater Treatment Facility receives municipal wastewater from the towns of Timberville, Broadway, and New Market, as well as poultry wastewater from Cargill Meat Solutions, Corporation LLC and Pilgrims Pride Corporation of Virginia plants located in Timberville. The plant uses a 5-stage BNR system to treat for BOD, solids, nutrients, etc. Sodium Aluminate is used to remove high levels of phosphorus generated from poultry wastewater.

b. Facility Block Diagram

Appendix C shows the sources of wastes influent to the Broadway Regional Water Treatment Facility. Wastewater from the Town of Broadway joins a stream of waste coming from the two poultry plants, running through a communitor before being pumped to the treatment facility. Wastewater from the Town of Timberville runs through a separate communitor before being pump to the line leading to plant, joining the waste stream from the other customers. New Market maintains its own pumpstation, sending wastewater down Rt. 211 to join with influent line in front of the BRWWTF. The influent waste comes through a barrel screen and grit removal system before being introduced into the anaerobic section of the BNR treatment system. Sludge is pumped to two digesters and then belt pressed for land application by a contracted firm, Agrisludge.

b. Sewage from Employees

Sewage from employees goes into a small pumpstation located behind the office building and is discharged into the influent stream with the rest of the wastewater influent to the plant.

c. Operational Parameters

The poultry plants delivering water to the facility operate all year long, usually running in two shifts, five days per week. The two towns served by the facility both send water to the plant 24 hours per day, all year long. The facility itself is in operation receiving and treating water constantly, but is only manned

DEQ VALLEY

SEP 23 2013

To: _____

Reissuance of VPDES Permit No. VA 0090263—BWTF
Virginia Pollution Abatement Permit Application
Form C

16 hours on weekdays and 8 hours on weekends. The irrigation equipment is operated for about 35 weeks per year, running from mid-March to mid-November at most. River discharge occurs throughout the year. Depending upon the amount of water that can be irrigated, river discharged may be shut off for weeks or even months at a time.

3. Non-Hazardous Declarations

See the declarations from Pilgrims Pride Corporation of Virginia and Cargill Meat Solutions, Corporation LLC in Appendix E.

4. Waste Characterization

See the Waste Characterization forms from pages C-L.3 to C-L.7 in Appendix D. Analyses given in part (a) are based on the last 12 months of plant operation (August 2012-July 2013).

5. Design of Waste Treatment Facility

See response for Form 2A Question B.3 in Additional Information.

6. Waste Storage Facilities

The BRWWTF has been upgraded since the previous permit reissuance. Cell 2 has become the one treatment cell by dividing it into five zones to make a Biological Nutrient Reduction system. The actual treatment system volume in Cell 2 is approximately 8 million gallons. Cell 1 now serves as a large flow equalization basin, while the storage reservoir is still used to hold water that will be irrigated. The storage reservoir can hold slightly over 250 million gallons and Cell 1 holds 36 million gallons.

7. DEQ Approval

The storage and treatment facilities listed above have been previously approved by the Department of Environmental Quality before plant construction and most recently with the permit reissuance in October of 2009 and the new O&M Manual reflecting changes after plant renovation was approved in March of 2011.

8. Alteration/Expansion of Previously Approved Facilities

The approved facilities have been altered since the last permit reissuance with a planned system upgrade finished in 2010. This upgrade/expansion was previously approved by the DEQ with the new O&M Manual being approved in March of 2011. The overall design, location, and operation of the system have not been altered since this time except for a switch to Sodium Aluminate from Aluminum Sulfate for phosphorus

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Reissuance of VPDES Permit No. VA 0090263—BWTF
Virginia Pollution Abatement Permit Application
Form C

precipitation. This change has been documented in the O&M Manual and sent to the DEQ for approval.

12. Land Application

Treated water from the plant is used to irrigate crops on 11 nearby fields. No changes have been made to the land application procedures since the last permit reissuance in October 2009. Sludge from the digesters is belt-pressed and placed in a sludge storage shed where it can be removed and land applied by contract firm Agrisludge. Therefore, there should be no changes needed to **Part C-II Land Application and Waste Handling Procedure** from the last permit reissuance.

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Additional Information**Sewage Sludge Application****Part 2**

The Broadway Regional Wastewater Treatment Facility produces sludge in two different ways. Solids are pumped to the two aerobic digesters from two different sources.

Solids are wasted in the traditional manner by pumping the thick return flow to the digesters to maintain an appropriate mixed liquor concentration in the treatment system.

The baffle curtains separating the different treatment zones are unable to totally prevent solids from seeping through, resulting in solids accumulating in the non-treatment side of Basin 2. These solids are removed through dredging done by Agrisludge Incorporated. This stream of solids is pumped to the two digesters along with the solids from the treatment system.

The sludge solids are digested through the aerobic process in the digesters and thickened by turning off the air and decanting the supernate once the solids have settled. After an average of 21 days, the liquid sludge is pumped to a belt press and cake sludge is produced. This cake sludge is then hauled to a sludge storage building where it is stored until it can be land applied by Agrisludge Incorporated, operating under their own VPA permit #01584.

Form 2A**A.8.c.**

Please see Appendix A - Topographic Map for Location of each field

Field	Average Annual Volume Applied (2002-2012)	
	#Acres	Average Annual Volume Applied (MG)
C-1	59.6	13.516
D-1	29.3	6.191
D-2	26.3	5.085
E-1	44.9	7.200
E-2	11.5	0.720
E-3	11.1	0.709
G-1	47.8	3.057
H-1	27.9	1.178
L-B	93	10.133
L-H	91	13.792
M-1	87.9	13.187

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Additional Information

At this time, no additional fields will be added to the permit. All applicable information is on file with the DEQ.

A.12.

CBOD

The maximum daily discharge concentration of CBOD reported on the table was a questionable result from the lab. The CBOD test from December 26th, 2012, returned a value of 74 mg/l. All other CBOD tests that week returned a value of <5.0 mg/L. The next highest CBOD result in the last year was a value of 29 mg/l. The average CBOD concentration for the past year without the 74 mg/L result was 2.65 mg/L.

Fecal Coliform/E. Coli

Fecal Coliform tests are not performed on effluent but E. Coli is tested for 3 times per week to ensure the UV disinfection system is working properly. We feel the maximum daily discharge result for E. Coli reported on the table was not accurate either because of lab error or contamination during sampling. The E. Coli test from June 14th, 2013, returned a value of 2420 n/cml. All other E. Coli tests that week and the following week returned values of <10 n/cml. The next highest E. Coli result over the previous year was 199 n/cml. The average E. Coli concentration for the past year without the 2420 n/cml result was 7.96 n/cml.

B.1.

BRWWTF Inflow & Infiltration issues revolve mainly around the Towns of Broadway, New Market, and Timberville during significant rain events. While these Since rain events are unpredictable in occurrence and amount, an accurate estimate in gallons per day cannot be calculated. However, the following scenario helps to calculate the amount of infiltration during a rain event of over 3 inches in two days time.

June 1-5, 2013, were dry days. The average flow from Broadway, New Market, and Timberville during this 5-day period was 0.198 MGD, 0.276 MGD, and 0.129 MGD respectively. A rain event from June 6-7 resulted in 3.85 inches of rain. The average flow from June 6-8 resulted in a flow from Broadway of 0.506 MGD, New Market of 1.471 MGD, and Timberville of 0.301 MGD. This gives a difference of 0.308 MGD for Broadway, 1.195 MGD for New Market, and 0.172 MGD for Timberville.

All three towns have taken steps to assess and minimize inflow and infiltration.

The Town of Broadway's I & I issue has never posed a serious problem at the facility, but higher flows during rain events are not optimal. The Town of Broadway has an ordinance that prohibits the discharge of storm water into the sewer system. The Town of Broadway commissioned smoke testing in November and December of 2008 to uncover leaks in the sewer lines and have worked to address problems found.

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The Town of New Market also has an ordinance that prohibits the discharge of storm water into the system. The Town of New Market had very significant I & I issues when they first joined the BRWWTF but have since spent a lot of money and resources to fix the worst of their I & I problems.

The Town of Timberville also has an ordinance that prohibits the discharge of storm water into the system. The Town of Timberville performed smoke testing on its sewer system to uncover leaks in May of 2006. Several leaks were discovered, and the town has worked to address these problems.

B.3.

See Appendix B for a Site Plan Map and Appendix C for the Process Flow Diagram of the Broadway Regional Wastewater Treatment Facility.

The Broadway Regional Wastewater Treatment Facility was upgraded in 2010 by using baffle curtains to convert a little less than half of Basin 2 into 5-Stage Biological Nutrient Reduction System. This system discharges treated water to the North Fork of the Shenandoah River as well as providing irrigation water to 10 nearby fields.

The incoming stream of wastewater from Broadway, Pilgrim's Pride, and Cargill flows through a communitor at the Cargill pump station before being pumped to the plant. The Timberville pump station has its own communitor for waste that is then pumped to join the influent wastewater from Broadway, Pilgrim's Pride, and Cargill. New Market operates its own pump station with a communitor that is pumped down to Rt. 211 to join the incoming stream of wastewater in front of the plant entrance.

Influent wastewater passes through a barrel screen to remove debris before heading to the treatment system. A steady flow of wastewater is maintained to the Treatment System in Basin 2 by diverting high flows and augmenting low flows (particularly on the weekend when Pilgrim's Pride and Cargill are not operating). Influent wastewater can be diverted to Basin 1 in times of high flow and water from Basin 1 can be brought back to maintain the flow during times of low influent flow. There is a spillway from Basin 1 to the Storage Reservoir to prevent Basin 1 from overflowing when high influent flow has to be diverted for an extended period of time. There is also a 6-inch pump that can pump water from the Storage Reservoir back to Basin 1 to ensure there is enough water to maintain a constant flow to the Treatment System. There is some treatment in Basin 1 and Storage by aeration.

Before entering the Basin 2 Treatment System, water passes through a grit removal system. Wastewater influent to the Treatment System is combined with Return water high in mixed liquor concentration from the two Clarifiers' settled solids. This stream enters the Anaerobic zone of the Treatment System. Raft-mounted mixers keep the mixed liquor well mixed as wastewater flows through the Anaerobic and 1st Anoxic zones.

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After going through the Anaerobic and 1st Anoxic zones, water flows through a large Aeration zone. This zone contains high DO established through the use of six surface aerators and numerous laterals across the bottom of the pond providing coarse air. This zone makes up the largest volume of the Treatment System and is primarily responsible for treating Ammonia.

After flowing through the Aeration Zone of the Treatment System, water makes a final turn into the last stretch of baffle curtains in Basin 2. This last stretch consists of the Final Anoxic Zone, Nitrate Recycle, and a Reaeration Zone. At this point, most of the Ammonia has been treated and there are more Nitrates in the water. The Final Anoxic Zone works to promote Denitrification, eliminating Nitrates. The Nitrate Recycle is also positioned at this location to pump water back to the 1st Anoxic Zone for more Nitrate Treatment. Upon exiting the Final Anoxic Zone, the water enters a small area where it is re-aerated before entering the Clarifiers.

As water exits the Reaeration Zone, it is treated with Sodium Aluminate for Phosphorus Treatment and flows into a splitter box and on to the Clarifiers. The Clarifiers allow the solids to settle out and a clear water with little suspended solids exits to the Clarifier Pump Station. The solids that settle to the bottom of the Clarifiers are pumped to the Return pump station where the solids are either returned to the head of the treatment system or are wasted to the Digesters to be pressed into cake sludge.

From the Clarifier Pump Station, treated water is pumped to the Denitrification Filters. These filters consist of beds of sand that act as a media for denitrifying bacteria to attach. A carbon food source is added to the filters to feed the denitrifying bacteria. Water is air-lifted up through the sand where it receives addition denitrification treatment as it contacts with the bacteria in the sand beds.

After exiting the Denitrification Filters, water goes through a UV treatment system for disinfection. Pipes lined with ultra-violet light bulbs act to sterilize any remaining bacteria before it leaves the Treatment System. There are two UV banks that are used interchangeably. While one UV bank is in use, the other will be cleaned to ensure there is no buildup or scaling on the UV bulbs that would prevent UV light from shining through the stream of water in the pipe.

After disinfection, water is either pumped to a Post Aeration Basin before exiting to Outfall 003 or is diverted to the Non-Potable Water System that supplies water for various uses throughout the plant.

The Post Aeration Basin consists of two sides equipped with fine air diffusers that provide additional dissolved oxygen to the water. There is a composite sampler at this location which provides the plant with effluent water samples for lab analysis.

From the Post Aeration Basin, fully treated water is either pumped to the Storage Reservoir or gravity-fed to Outfall 003 and in to the North Fork of the Shenandoah River. (See Appendix A)

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Additional Information

From the Storage Reservoir, treated water is pumped to irrigation rigs on nearby fields. Chlorinated water is pumped to 10 irrigation rigs located near the plant site (see Appendix A). Treated wastewater is maintained with a chlorine level of 2.0 mg/l or higher to ensure disinfection of fecal coliform. Buffers for irrigation are maintained in accordance with DEQ guidelines. Currently, irrigation is limited to 0.50 inches per pass. The approved nutrient management plan, soil moisture sensors, and crop irrigation schedules guide irrigation of fields. No more nutrients than the crop uptake can be sprayed onto the fields.

Treated water is also discharged to the North Fork of the Shenandoah River via an outfall located across from the plant on the other side of Rt. 211. The location of Outfall 003 can be seen in Appendix A: Topographic Map 2.

The Water Balance for the 2012 Calendar year is as follows.

At the close of year 2011 operations, there were 87.490 MG million gallons (MG) in the storage reservoir. The Broadway Wastewater Treatment Facility received 568.136 MG in system influent in 2012. Irrigation flows during the year amounted to 45.800 MG, and river discharge flows amounted to 442.300 MG, for a total outflow of 488.100 MG.

$87.490 \text{ MG at start of 2012} + 568.136 \text{ MG influent} - 488.100 \text{ MG outflow} = 167.526 \text{ MG.}$

The storage pond was measured on January 1, 2013, and there were 170.212 MG remaining in the storage reservoir, for a difference between actual and estimated storage volumes of 2.686 MG. This difference is attributed to flow meter discrepancy, evaporation from the storage pond, rainfall into the system, and removal of water from the storage pond to offset sludge removal from the non-treatment side of Cell 2. All flow meters were calibrated in March of 2012.

D.

See Waste Characterization in Appendix D.

E.2 and E.4

Summary of Submitted Biomonitoring Information

Under the current permit, Quarterly Chronic Ceriodaphnia Dubia and Fathead Minnow tests are required and Quarterly Acute Ceriodaphnia Dubia and Fathead Minnow tests were required once the CTO for the plant renovation was completed. Acute Toxicity testing began in 2011. Tests were performed and the results submitted to the DEQ for the following tests dating back to January 2009:

Month	Ceriodaphnia Dubia Toxicity		Fathead Minnow Toxicity	
	Chronic (TU-C)	Acute (TU-A)	Chronic (TU-C)	Acute (TU-A)

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Additional Information

	Survival	Reproduction	Survival	Survival	Reproduction	Survival
Jan-09	1.51	2.27	NA	1.0	1.0	NA
Apr-09	2.27	2.27	NA	1.0	1.0	NA
Jul-09	1.0	1.0	NA	1.0	1.0	NA
Oct-09	1.0	1.0	NA	1.0	1.0	NA
Feb-10	>5.15	>5.15	NA	2.27	5.15	NA
May-10	1.0	1.0	NA	1.0	1.0	NA
Jul-10	1.0	1.0	NA	1.0	1.0	NA
Oct-10	1.0	1.0	NA	1.0	1.0	NA
Mar-11	1.0	1.0	1.0	1.0	1.0	1.0
Jun-11	1.0	1.0	1.0	1.0	1.0	1.0
Sep-11	1.0	1.0	1.0	1.0	1.0	1.0
Dec-11	1.0	1.75	1.0	1.0	1.0	1.0
Mar-12	1.0	1.75	1.0	1.0	1.0	1.0
May-12	1.0	1.0	1.0	1.0	1.0	1.0
Sep-12	1.75	2.33	1.0	1.0	1.0	1.0
Oct-12	1.75	>3.08	1.0	1.0	1.0	1.0
Nov-12	1.0	1.32	NA	NA	NA	NA
Jan-13	1.75	1.75	2.0	1.0	1.75	1.0
Feb-13	NA	NA	1.0	NA	NA	NA
Apr-13 REIC	1.0	1.75	1.0	1.0	1.0	1.0
Apr-13 Coastal Bioanalysts	1.0	1.75	1.0	Invalid	Invalid	1.0
Jul-13	1.0	1.0	1.0	1.0	1.0	1.0

After the Acute Ceriodaphnia Dubia test failed in January 2013, a meeting was held with DEQ staff to address the toxicity issue. Another Acute Ceriodaphnia Dubia test was run in February 2013 and met permit limits. Steps were taken to investigate and address the recurring toxicity problems.

To investigate the issue, samples of effluent were tested for metals, hardness, magnesium, and tributyltin. Hardness and magnesium levels were found to be somewhat elevated but no tributyltin or metals that directly affect toxicity were found. To lower the hardness and magnesium levels, the use of Magnesium Hydroxide for pH adjustment was discontinued.

The Quarterly Toxicity testing for April 2013 was split sampled between REIC laboratories and Coastal Bioanalysts, a lab recommended by DEQ staff. Neither of these tests showed toxicity to Ceriodaphnia Dubia.

In talking to the Bioassay lab manager at Coastal Bioanalysts, it was brought to our attention that the lab dilutions used in previous Toxicity tests might not be appropriate for our limits. We never brought the new permit limits to the attention of the Bioassay lab manager at REIC laboratories, not realizing that the dilutions used are tailored for the limits needed to achieve.

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Additional Information

Since this time there have been no further violations of permitted toxicity limits. We think that by reducing the hardness and magnesium levels and using the correct lab dilutions, we will be compliant with permitted toxicity limits.

We are currently testing for toxicity quarterly in accordance with our permit requirements.

DEQ VALLEY

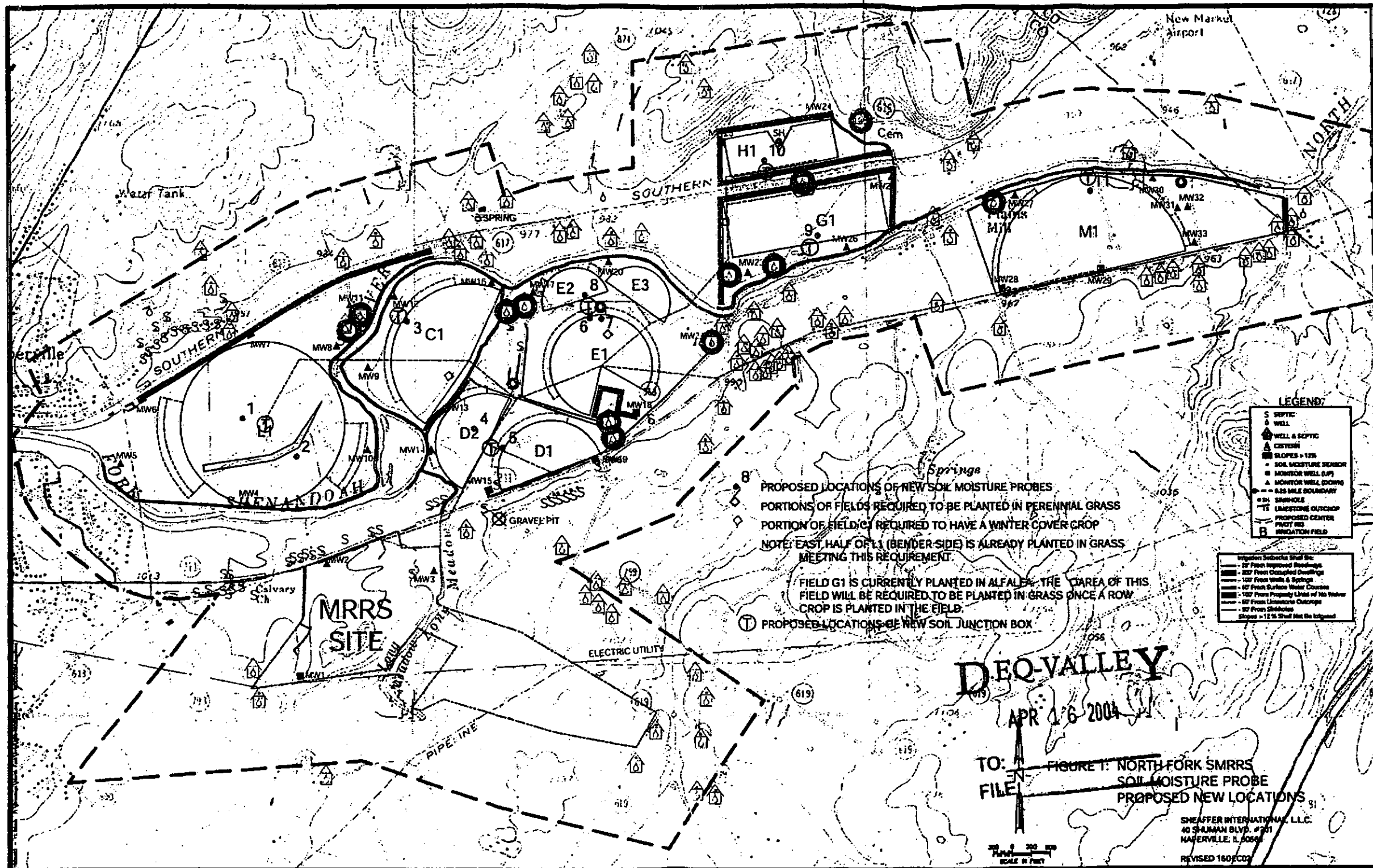
SEP 23 2013

To: _____

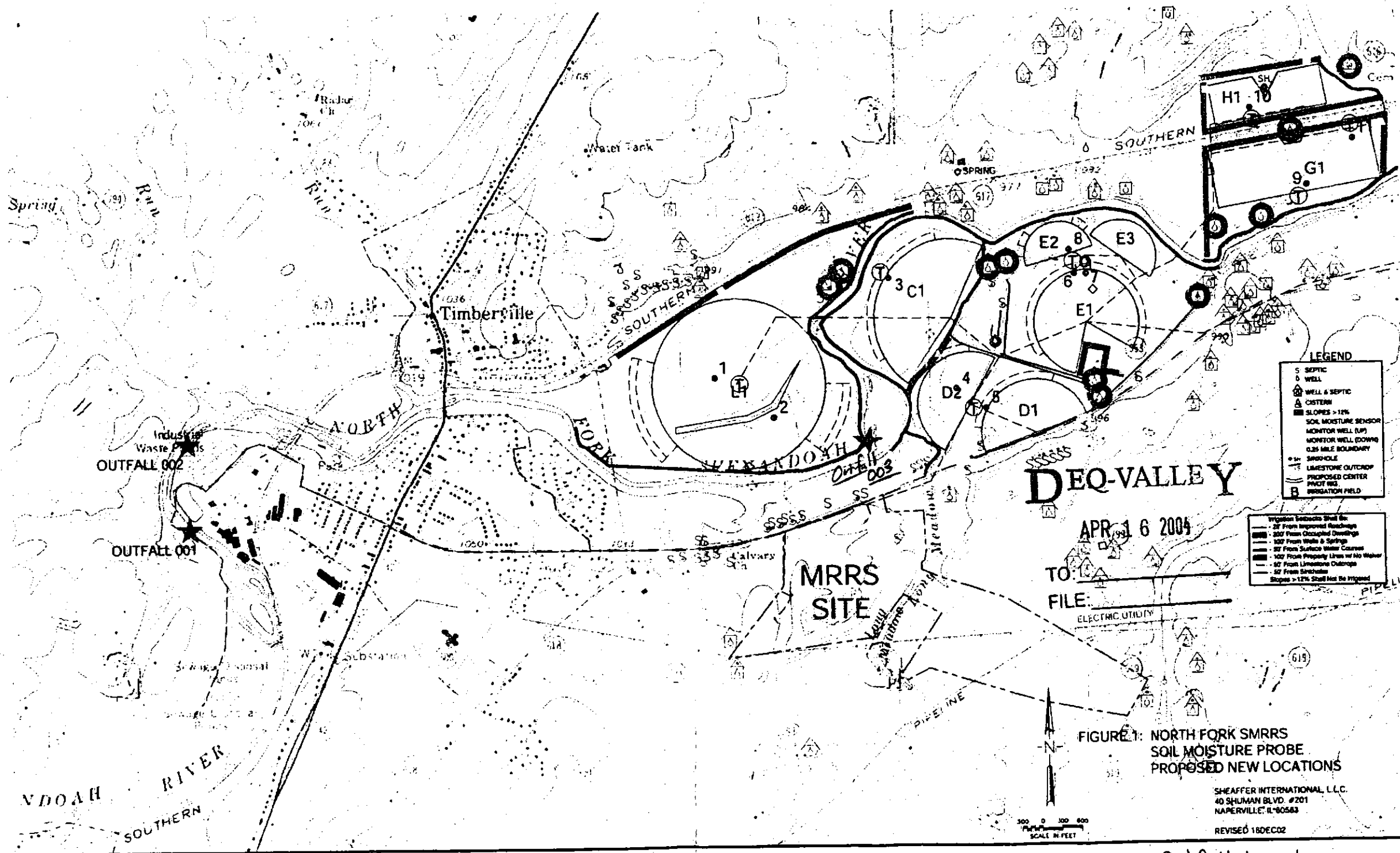
Date: _____

Appendix A
Topographic Maps

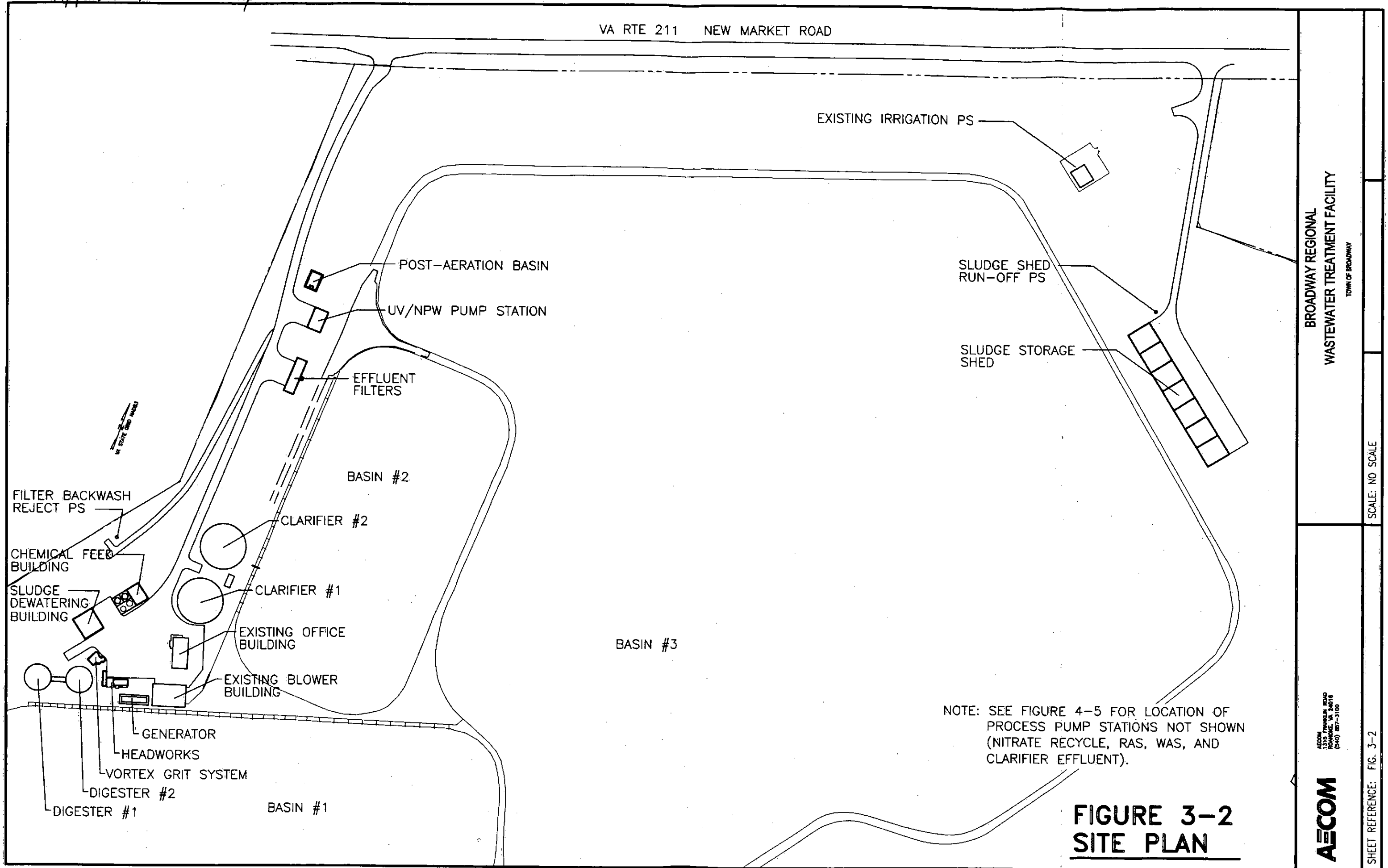
- 1. Plant and Irrigation Fields Map**
- 2. Plant and Irrigation Fields Map showing River Discharge at Outfall 003**
- 3. Plant Site Map**



Appendix A: Topographic Map 2



Outfall Locations



ANSI Z39-18 22-Jun-10

BROADWAY REGIONAL
WASTEWATER TREATMENT FACILITY
TOWN OF BROADWAY

SCALE: NO SCALE

SHEET REFERENCE: FIG. 3-2

AECOM
1315 FRANKLIN ROAD
SPRINGFIELD, MA 01106
(413) 267-3100

AECOM

Reissuance of VPDES Permit No. VA 0090263—BWTF

Appendix B
Sludge Testing

REI Consultants, Inc. - Analytical Report

WO#: 1308P83

Date Reported: 9/3/2013

Client: TOWN OF BROADWAY
Project:
Lab ID: 1308P83-01A
Client Sample ID: SLUDGE

Collection Date: 8/22/2013 2:00:00 PM
Date Received: 8/23/2013
Matrix: Sludge
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
CALCIUM CARBONATE EQUIVALENT		Method: ASTM C25-99.33				Analyst: CH	
Calcium Carbonate Equivalent	14.5	0.100	NA		wt%		8/28/2013 4:05 PM
METALS by ICP		Method: SW6010C SW3050B				Analyst: CGW	
Aluminum	41,800	250	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/29/2013 5:44 PM
Arsenic	ND	5.00	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/28/2013 2:42 PM
Cadmium	0.977	0.500	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/28/2013 2:42 PM
Copper	389	2.50	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/28/2013 2:42 PM
Lead	12.0	5.00	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/28/2013 2:42 PM
Magnesium	5,100	125	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/28/2013 2:45 PM
Molybdenum	6.97	2.50	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/28/2013 2:42 PM
Nickel	20.9	2.50	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/28/2013 2:42 PM
Phosphorus	45,900	1,250	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/29/2013 5:44 PM
Potassium	2,810	125	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/28/2013 2:45 PM
Selenium	6.45	5.00	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/28/2013 2:42 PM
Sodium	1,740	250	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/28/2013 2:45 PM
Zinc	983	25.0	NA		mg/Kg-dry	8/27/2013 9:00 AM	8/28/2013 2:45 PM
MERCURY, Total		Method: SW7471B SW7471				Analyst: DS	
Mercury	0.295	0.100	NA		mg/Kg-dry	8/27/2013 10:41 AM	8/28/2013 1:24 PM
ANIONS by IC, WATER SOLUBLE		Method: E300.0				Analyst: CF	
Fluoride	ND	22.0	NA		mg/Kg-dry		8/26/2013 4:29 PM
Nitrogen, Nitrate	1,650	275	NA		mg/Kg-dry		8/26/2013 4:29 PM
Sulfate	2,560	549	NA		mg/Kg-dry		8/26/2013 4:29 PM
AMMONIA NITROGEN		Method: SM4500-NH3 B-C				Analyst: MC	
Nitrogen, Ammonia	1,970	275	NA		mg/Kg-dry		8/29/2013 8:00 AM
TOTAL KJELDAHL NITROGEN (TKN)		Method: E351.2				Analyst: AL	
Nitrogen, Kjeldahl, Total	20,100	2,750	NA		mg/Kg-dry		8/28/2013 9:05 AM
SOLIDS, Total		Method: SM2540 G				Analyst: SF	
Total Solids	18.2	0.01	NA		wt%		8/24/2013 10:15 AM
TOTAL VOLATILE SOLIDS		Method: SM2540 G				Analyst: SF	
Total Volatile Solids	61.5	1.00	NA		wt%		8/24/2013 12:00 PM
pH		Method: SW9045D				Analyst: CC	
pH	6.32	NA	NA		SU		8/27/2013 9:56 AM

REI Consultants, Inc. - Analytical Report

WO#: 1301P31

Date Reported: 2/1/2013

Client:	TOWN OF BROADWAY	Collection Date:	1/29/2013 8:00:00 AM
Project:		Date Received:	1/29/2013 10:16:16 PM
Lab ID:	1301P31-01A	Matrix:	Sludge
Client Sample ID:	SLUDGE 1	Site ID:	

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER							Analyst: CC
Fecal Coliform	11,200		NA		col/gram dry-wt		1/30/2013 7:00 AM
SOLIDS, Total							Analyst: SF
Total Solids	14.6	0.01	NA		wt%		1/30/2013 4:24 PM

REI Consultants, Inc. - Analytical Report

WO#: 1301P31

Date Reported: 2/1/2013

Client: TOWN OF BROADWAY
Project:
Lab ID: 1301P31-02A
Client Sample ID: SLUDGE 2

Collection Date: 1/29/2013 8:30:00 AM
Date Received: 1/29/2013 10:18:16 PM
Matrix: Sludge
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER		Method: SM9222 D					Analyst: CC
Fecal Coliform	7,640		NA		col/gram dry-wt		1/30/2013 7:00 AM
SOLIDS, Total		Method: SM2540 G					Analyst: SF
Total Solids	14.4	0.01	NA		wt%		1/30/2013 4:24 PM

REI Consultants, Inc. - Analytical Report**WO#: 1301P31****Date Reported: 2/1/2013**

Client: TOWN OF BROADWAY
Project:
Lab ID: 1301P31-03A
Client Sample ID: SLUDGE 3

Collection Date: 1/29/2013 8:45:00 AM
Date Received: 1/29/2013 10:18:16 PM
Matrix: Sludge
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER							Analyst: CC
Fecal Coliform	44,600		NA		col/gram dry-wt		1/30/2013 7:00 AM
SOLIDS, Total							Analyst: SF
Total Solids	15.7	0.01	NA		wt%		1/30/2013 4:24 PM

REI Consultants, Inc. - Analytical Report**WO#: 1301P31****Date Reported: 2/1/2013**

Client:	TOWN OF BROADWAY	Collection Date:	1/29/2013 9:00:00 AM
Project:		Date Received:	1/29/2013 10:18:16 PM
Lab ID:	1301P31-04A	Matrix:	Sludge
Client Sample ID:	SLUDGE 4	Site ID:	

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
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FECAL COLIFORM BY MEMBRANE FILTER				Method: SM9222 D			Analyst: CC
Fecal Coliform	8,490		NA		col/gram dry-wt		1/30/2013 8:45 AM

SOLIDS, Total				Method: SM2540 G			Analyst: SF
Total Solids	13.8	0.01	NA		wt%		1/30/2013 4:24 PM

REI Consultants, Inc. - Analytical Report

WO#: 1301P31

Date Reported: 2/1/2013

Client: TOWN OF BROADWAY
Project:
Lab ID: 1301P31-05A
Client Sample ID: SLUDGE 5

Collection Date: 1/29/2013 9:15:00 AM
Date Received: 1/29/2013 10:18:16 PM
Matrix: Sludge
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER		Method: SM9222 D				Analyst: CC	
Fecal Coliform	8,820		NA		col/gram dry-wt		1/30/2013 8:45 AM
SOLIDS, Total		Method: SM2540 G				Analyst: SF	
Total Solids	14.6	0.01	NA		wt%		1/30/2013 4:24 PM

REI Consultants, Inc. - Analytical Report

WO#: 1301P31

Date Reported: 2/1/2013

Client: TOWN OF BROADWAY
Project:
Lab ID: 1301P31-06A
Client Sample ID: SLUDGE 6

Collection Date: 1/29/2013 9:30:00 AM
Date Received: 1/29/2013 10:18:16 PM
Matrix: Sludge
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER		Method: SM9222 D					Analyst: CC
Fecal Coliform	8,560		NA		col/gram dry-wt		1/30/2013 8:45 AM
SOLIDS, Total		Method: SM2540 G					Analyst: SF
Total Solids	13.8	0.01	NA		wt%		1/30/2013 4:24 PM

REI Consultants, Inc. - Analytical Report

WO#: 1301P31

Date Reported: 2/1/2013

Client:	TOWN OF BROADWAY	Collection Date:	1/29/2013 9:45:00 AM
Project:		Date Received:	1/29/2013 10:18:16 PM
Lab ID:	1301P31-07A	Matrix:	Sludge
Client Sample ID:	SLUDGE 7	Site ID:	

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER							Analyst: CC
Fecal Coliform	8,840		NA		col/gram dry-wt		1/30/2013 8:45 AM
SOLIDS, Total							Analyst: SF
Total Solids	14.4	0.01	NA		wt%		1/30/2013 4:24 PM

REI Consultants, Inc. - Analytical Report

WO#: 1301P31

Date Reported: 2/1/2013

Client: TOWN OF BROADWAY
Project:
Lab ID: 1301P31-08A
Client Sample ID: SLUDGE 8

Collection Date: 1/29/2013 10:00:00 AM
Date Received: 1/29/2013 10:18:16 PM
Matrix: Sludge
Site ID:

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER		Method: SM9222 D				Analyst: CC	
Fecal Coliform	7,400		NA		col/gram dry-wt		1/30/2013 8:45 AM
SOLIDS, Total		Method: SM2540 G				Analyst: SF	
Total Solids	14.6	0.01	NA		wt%		1/30/2013 4:24 PM

REI Consultants, Inc. - Analytical Report

WO#: 1301P31

Date Reported: 2/1/2013

Client:	TOWN OF BROADWAY	Collection Date:	1/29/2013 10:15:00 AM
Project:		Date Received:	1/29/2013 10:18:16 PM
Lab ID:	1301P31-09A	Matrix:	Sludge
Client Sample ID:	SLUDGE 9	Site ID:	

Analysis	Result	PQL	MCL	Qual	Units	PrepDate	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER							Analyst: CC
Fecal Coliform	8,810		NA		col/gram dry-wt		1/30/2013 8:45 AM
SOLIDS, Total							Analyst: SF
Total Solids	13.3	0.01	NA		wt%		1/30/2013 4:24 PM



A&L Eastern Laboratories

7821 Whiteline Road Richmond, Virginia 23237 (804) 743-8401 Fax (804) 271-8448

00111

Town of Broadway
Lee Grieco
POB 156
Broadway, VA 22815

Project LEE GRIECO
Information: BROADWAY WWTF - B /OUT

Report Date : 3/29/2012

Submitted By : LEE GRIECO
Report Number : 12-074-0228

REPORT OF ANALYSIS

Received : 3/14/2012

Lab No : 86822
Sample ID : B

Matrix: Solids
Sampled: 3/13/2012 14:00

Paint Filter Test Pass 1 03/19/12 15:33 KAT SW-9095A

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Method
Cyanide (Reactivity)	<0.125	mg/Kg	0.125	1	03/22/12 12:00	NRT	SW-7.3.3
Ignitability	>96	Degrees C		1	03/19/12 09:15	NRT	ASTM D93-80 ~
Sulfide (Reactivity)	<25.0	mg/Kg	25.0	1	03/22/12 12:00	NRT	SW-7.3.4

Analytical Method: 8082

Prep Method: 35508

Prep Batch(es): L127283

Date/Time Prepped:

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Batch
Aroclor 1016	<0.0910	mg/Kg	0.0910	1	03/24/12 05:10	VIC	L127544
Aroclor 1221	<0.0910	mg/Kg	0.0910	1	03/24/12 05:10	VIC	L127544
Aroclor 1232	<0.0910	mg/Kg	0.0910	1	03/24/12 05:10	VIC	L127544
Aroclor 1242	<0.0910	mg/Kg	0.0910	1	03/24/12 05:10	VIC	L127544
Aroclor 1248	<0.0910	mg/Kg	0.0910	1	03/24/12 05:10	VIC	L127544
Aroclor 1254	<0.0910	mg/Kg	0.0910	1	03/24/12 05:10	VIC	L127544
Aroclor 1260	<0.0910	mg/Kg	0.0910	1	03/24/12 05:10	VIC	L127544

Surrogate: Decachlorobiphenyl 85.3 % Limits: 17-141% 1 03/24/12 05:10 VIC L127544
Surrogate: Tetrachloro-m-xylene 76.9 % Limits: 20-122% 1 03/24/12 05:10 VIC L127544

Qualifiers/ Definitions

* Outside QC limit

B Analyte detected in blank



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7521 Whitestone Road, Richmond, Virginia 23227 (804) 743-8401 Fax (804) 271-8446

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Town of Broadway
POB 156

Project B/OUT
Description

Broadway, VA 22815

Lab Order Number 12-074-0228
Lab ID 1203078-001A
Field ID B
Sample Number 86822

Report of Analysis

Received 03/19/12
Matrix Solid
Sampled 03/13/12

1311 TCLP Characterization

Prep Batch 35936

Date/Time 03/20/12 17:10

Leachate

Analytical Method 6010B

Prep Method 3005A

Prep Batch 35944

Final Volume 50 mL

Date/Time Prepped 03/21/12 13:22

Compound	Result	Units	MQL	DF	Date/Time Analyzed	By	Analytical Batch
Silver	< 0.005	mg/L	0.005	1	03/23/12 2:03	KN	51894
Arsenic	< 0.025	mg/L	0.025	1	03/23/12 2:03	KN	51894
Barium	< 0.025	mg/L	0.025	1	03/23/12 2:03	KN	51894
Cadmium	< 0.005	mg/L	0.005	1	03/23/12 2:03	KN	51894
Chromium	< 0.010	mg/L	0.010	1	03/23/12 2:03	KN	51894
Lead	< 0.010	mg/L	0.010	1	03/23/12 2:03	KN	51894
Selenium	< 0.050	mg/L	0.050	1	03/23/12 2:03	KN	51894

Analytical Method 7470A

Prep Method 7470A

Prep Batch 35947

Final Volume 20 mL

Date/Time Prepped 03/22/12 9:53

Compound	Result	Units	MQL	DF	Date/Time Analyzed	By	Analytical Batch
Mercury	< 0.0010	mg/L	0.0010	1	03/22/12 15:07	TJ	51899

Qualifiers/ Definitions

- * Surrogate Recovery outside accepted limits
- B Analyte detected in the associated Method Blank
- E Value exceeds method calibration range
- J Estimated Value Analyte below reported detection limit
- MDL Method Detection Limit (adjusted)
- MRL Method Reporting Limit
- Q RPD >40% between primary and confirmation columns

- * I Recoveries affected by interferences or high background
- DF Dilution Factor
- H Prepped / Analyzed out of holding time.
- M Minimum value
- MQL Method Quantitation Limit (adjusted)
- N Refer to attached Non-Compliance Report
- SQL Sample Quantitation Limit (adjusted MDL)

03/26/12 1:11 TOWN_OF_BROAD_ALE



A&L Eastern Laboratories, Inc.

2021 Whiteline Road, Richmond, Virginia 23237 (804) 749-4300 Fax (804) 771-6000

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Town of Broadway

POB 156

Broadway, VA 22815

Project B/OUT

Description

Lab Order Number 12-074-0228

Lab ID 1203078-001A

Field ID B

Sample Number 86822

Report of Analysis

Received 03/19/12

Matrix Solid

Sampled 03/13/12 14:00

1311 TCLP Characterization

Prep Batch 35936

Date/Time 03/20/12 17:10

Leachate

Analytical Method 8081A

Prep Method	3510C	Prep Batch	35969			Date/Time	Prepped	03/23/12 10:10
Compound	Default Vol/Wt	1000 mL	Sample Vol/Wt	250 mL		Date/Time	Analytical	
	Result	Units	ML	DF		Analyzed	By	Batch
gamma-BHC	< 0.000160	mg/L	0.000160	10		03/23/12 20:52	VC	51919
Chlordane	< 0.00100	mg/L	0.00100	10		03/23/12 20:52	VC	51919
Endrin	< 0.000160	mg/L	0.000160	10		03/23/12 20:52	VC	51919
Heptachlor	< 0.000160	mg/L	0.000160	10		03/23/12 20:52	VC	51919
Heptachlor epoxide	< 0.000160	mg/L	0.000160	10		03/23/12 20:52	VC	51919
Methoxychlor	< 0.000160	mg/L	0.000160	10		03/23/12 20:52	VC	51919
Toxaphene	< 0.00120	mg/L	0.00120	10		03/23/12 20:52	VC	51919
Surrogate: Decachlorobiphenyl		73 %	Limits: 36-116	10		03/23/12 20:52	VC	51919
Surrogate: Tetrachloro-m-xylene		35 %	Limits: 25-123	10		03/23/12 20:52	VC	51919

Qualifiers/ Definitions

- * Surrogate Recovery outside accepted limits
- B Analyte detected in the associated Method Blank
- E Value exceeds method calibration range
- J Estimated Value Analyte below reported detection limit
- MDL Method Detection Limit (adjusted)
- MRL Method Reporting Limit
- Q RPD >40% between primary and confirmation columns

- * I Recoveries affected by interferences or high background
- DF Dilution Factor
- H Prepped / Analyzed out of holding time
- M Minimum value
- SQL Sample Quantitation Limit (adjusted MDL)

03/26/12 111 TOWN_OF_BROAD_ALE



A&L Eastern Laboratories, Inc.

7621 Whitepine Road, Portsmouth, Virginia 23237 (504) 749-4451 Fax (504) 271-8408

Town of Broadway
POB 156
Broadway, VA 22815

Project **B/OUT**
Description

Lab Order Number **12-074-0228**
Lab ID **1203078-001A**
Field ID **B**
Sample Number **86822**

Report of Analysis

Received **03/19/12**
Matrix **Solid**
Sampled **03/13/12 14:00**

1311 TCLP Characterization

Prep Batch 35936

Date/Time 03/20/12 17:10

Leachate

Analytical Method 8151A

Prep Method	8151A	Prep Batch	35967	Date/Time Prepped		03/23/12 8:30	
Compound	Result	Default Vol/Wt	1000 mL	Sample Vol/Wt	50 mL	Date/Time Analyzed	Analytical Batch
			Units		MQL DF	By	
2,4-D	< 0.00200		mg/L	0.00200	1	03/24/12 12:01	VC 51920
2,4,5-TP (Silvex)	< 0.000600		mg/L	0.000600	1	03/24/12 12:01	VC 51920
Surrogate: DCAA			63 %	Limits: 20-150	1	03/24/12 12:01	VC 51920

Qualifiers/ Definitions

- * Surrogate Recovery outside accepted limits
- B Analyte detected in the associated Method Blank
- E Value exceeds method calibration range
- J Estimated Value Analyte below reported detection limit
- MDL Method Detection Limit (adjusted)
- MRL Method Reporting Limit
- Q RPD >40% between primary and confirmation columns

- * I Recoveries affected by interferences or high background
- DF Dilution Factor
- H Prepped / Analyzed out of holding time.
- M Minimum value
- MQL Method Quantitation Limit (adjusted)
- N Refer to attached Non-Compliance Report
- SQL Sample Quantitation Limit (adjusted MDL)

03/26/12 III TOWN_OF_BROAD_ALE



A&L Eastern Laboratories, Inc.

7621 Whitmore Road (Richmond, Virginia 23237) (804) 749-0400 Fax (804) 271-6665

www.al-labs.com

Town of Broadway

POB 156

Broadway, VA 22815

Project B/OUT

Description

Lab Order Number 12-074-0228

Lab ID 1203078-001A

Field ID B

Sample Number 86822

Report of Analysis

Received 03/19/12

Matrix Solid

Sampled 03/13/12 14:00

1311 TCLP Characterization

Prep Batch 35936

Date/Time 03/20/12 17:10

Leachate

Analytical Method 8270C

Prep Method 3510C Prep Batch 35941 Date/Time Prepped 03/21/12 10:00

Compound	Default Vol/Wt	1000 mL	Sample Vol/Wt	250 mL	Date/Time Analyzed	Analytical Batch
	Result	Units	MQL	DF	By	

2,4-Dinitrofluorene	< 0.0200	mg/L	0.0200	1	03/23/12 14:49	MJ 51917
Hexachlorobenzene	< 0.0200	mg/L	0.0200	1	03/23/12 14:49	MJ 51917
Hexachlorobutadiene	< 0.0200	mg/L	0.0200	1	03/23/12 14:49	MJ 51917
Hexachloroethane	< 0.0200	mg/L	0.0200	1	03/23/12 14:49	MJ 51917
2-Methylphenol	< 0.0200	mg/L	0.0200	1	03/23/12 14:49	MJ 51917
3&4-Methylphenol	< 0.0200	mg/L	0.0200	1	03/23/12 14:49	MJ 51917
Nitrobenzene	< 0.0200	mg/L	0.0200	1	03/23/12 14:49	MJ 51917
Pentachlorophenol	< 0.0400	mg/L	0.0400	1	03/23/12 14:49	MJ 51917
Pyridine	< 0.0400	mg/L	0.0400	1	03/23/12 14:49	MJ 51917
2,4,5-Trichlorophenol	< 0.0200	mg/L	0.0200	1	03/23/12 14:49	MJ 51917
2,4,6-Trichlorophenol	< 0.0200	mg/L	0.0200	1	03/23/12 14:49	MJ 51917
Surrogate: Nitrobenzene-d5	59 %	Limits: 29-110	1	03/23/12 14:49	MJ 51917	
Surrogate: 2-Fluorobiphenyl	62 %	Limits: 38-107	1	03/23/12 14:49	MJ 51917	
Surrogate: 4-Terphenyl-d14	60 %	Limits: 33-122	1	03/23/12 14:49	MJ 51917	
Surrogate: Phenol-d6	19 %	Limits: 10-115	1	03/23/12 14:49	MJ 51917	
Surrogate: 2,4,6-Tribromophenol	69 %	Limits: 40-125	1	03/23/12 14:49	MJ 51917	
Surrogate: 2-Fluorophenol	31 %	Limits: 20-110	1	03/23/12 14:49	MJ 51917	

Qualifiers/	* Surrogate Recovery outside accepted limits	* I Recoveries affected by interferences or high background
Definitions	B Analyte detected in the associated Method Blank	DF Dilution Factor
	E Value exceeds method calibration range	H Prepped / Analyzed out of holding time.
	J Estimated Value Analyte below reported detection limit	M Minimum value
	MDL Method Decision Limit (adjusted)	MQL Method Quantitation Limit (adjusted)
	MRL Method Reporting Limit	N Refer to attached Non-Compliance Report
	Q RPD > 40% between primary and confirmation columns	SQL Sample Quantitation Limit (adjusted MDL)

03/26/12 111 TOWN_OF_BROAD_ALE



A&L Eastern Laboratories, Inc.

7021 Whitestone Road, Richmond, Virginia 23237 (804) 743-6461 Fax (804) 771-6466

Town of Broadway
POB 156
Broadway, VA 22815

Project B/OUT
Description

Lab Order Number 12-074-0228
Lab ID 1203078-001B
Field ID B
Sample Number 86822

Report of Analysis
Received 03/19/12
Matrix Solid
Sampled 03/13/12 14:00

1311 TCLP Zero Headspace for Volatiles

Prep Batch 35937

Date/Time 03/20/12 17:10

Analytical Method 8260B

Prep Method	5030B	Prep Batch	35965	Date/Time	Prepped	03/23/12 14:14
Compound	Default Vol/Wt	10 mL	Sample Vol/Wt	10 mL	Date/Time	Analytical
	Result	Units	ML	DF	Analyzed	By
Benzene	< 0.0100	mg/L	0.0100	10	03/23/12 14:38	SB
2-Butanone (MEK)	< 0.200	mg/L	0.200	10	03/23/12 14:38	SB
Carbon tetrachloride	< 0.0100	mg/L	0.0100	10	03/23/12 14:38	SB
Chlorobenzene	< 0.0100	mg/L	0.0100	10	03/23/12 14:38	SB
Chloroform	< 0.0100	mg/L	0.0100	10	03/23/12 14:38	SB
1,4-Dichlorobenzene	< 0.0100	mg/L	0.0100	10	03/23/12 14:38	SB
1,2-Dichloroethane	< 0.0100	mg/L	0.0100	10	03/23/12 14:38	SB
1,1-Dichloroethene	< 0.0100	mg/L	0.0100	10	03/23/12 14:38	SB
Tetrachloroethene	< 0.0100	mg/L	0.0100	10	03/23/12 14:38	SB
Trichloroethene	< 0.0100	mg/L	0.0100	10	03/23/12 14:38	SB
Vinyl chloride	< 0.0100	mg/L	0.0100	10	03/23/12 14:38	SB
Surrogate: Dibromofluoromethane	114 %	Limits: 70-128	10	03/23/12 14:38	SB	51908
Surrogate: Toluene-d8	113 %	Limits: 70-130	10	03/23/12 14:38	SB	51908
Surrogate: 4-Bromofluorobenzene	121 %	Limits: 71-131	10	03/23/12 14:38	SB	51908
Surrogate: 1,2-Dichloroethane-d4	111 %	Limits: 67-136	10	03/23/12 14:38	SB	51908

Qualifiers/			
Definitions	* Surrogate Recovery outside accepted limits	* I Recoveries affected by interferences or high background	
B	Analyte detected in the associated Method Blank	DF	Dilution Factor
E	Value exceeds method calibration range	H	Prepped / Analyzed out of holding time
J	Estimated Value Analyte below reported detection limit	M	Minimum value
MDL	Method Detection Limit (adjusted)	SQL	Sample Quantitation Limit (adjusted MDL)
MRL	Method Reporting Limit		
Q	RPD >40% between primary and confirmation columns		

03/26/12 111 TOWN_OF_BROAD_ALE

Report Number: 12-073-0200

Account Number: 00111

Submitted By: LEE GRIECO

Send To: Town of Broadway
 Lee Grieco
 POB 156
 Broadway, VA 22815



The One Source.

A&L Eastern Laboratories

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Project : BROADWAY WWTF PROCESS SLUDGE
 TIMBERVILLE VA

Lab Number : 86771

Sample Id : B

REPORT OF ANALYSIS

Date Sampled: 3/12/2012 10:00:00

Date Received: 03/13/2012 00:00

Date Reported: 03/16/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	14.11	141100	100.0	JM	03/13/2012 15:00	SM-2540G
Moisture *	85.89		100.0	JM	03/13/2012 15:00	SM-2540G
Total Kjeldahl Nitrogen	6.57	65700	10.0	JM	03/15/2012 07:45	SM-4500-NH3C-TKN
Total Phosphorus	3.84	38400	100	KM	03/14/2012 14:14	SW 6010C
Total Potassium	0.55	5540	100	KM	03/14/2012 14:14	SW 6010C
Ammonia Nitrogen	0.57	5670	10.0	JM	03/14/2012 07:59	SM-4500-NH3C
Organic N	6.00	60030	10.0		03/14/2012 07:59	CALCULATION -
Nitrate+Nitrite-N		186	1.00	JM	03/14/2012 08:00	SM-4500NO3F
Total Cadmium		<1.0	1.0	KM	03/14/2012 14:14	SW 6010C
Total Nickel		13	5	KM	03/14/2012 14:14	SW 6010C
Total Lead		6	5	KM	03/14/2012 14:14	SW 6010C
Total Arsenic		4.0	1.0	KM	03/14/2012 14:14	SW 6010C
Total Mercury		<0.4	0.4	KM	03/14/2012 09:00	SW-7471B
Total Selenium		2.0	1.0	KM	03/14/2012 14:14	SW 6010C
pH (Standard Units) *	7.63		0.01	JM	03/14/2012 07:59	SW-9045D
Calcium Carbonate Equivalent	<0.01	<100	100	MW	03/14/2012 12:20	AOAC 955.01 -
Total Volatile Solids	71.43	714300	100.0	JM	03/13/2012 15:00	SM-2540G
Total Molybdenum		6	5	KM	03/14/2012 14:14	SW 6010C

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

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Debbie Holt

Report Number: 12-073-0200

Account Number: 00111

Submitted By: LEE GRIECO

Send To: Town of Broadway
Lee Grieco
POB 156
Broadway, VA 22815



A&L Eastern Laboratories

7521 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Project : BROADWAY WWTF PROCESS SLUDGE
TIMBERVILLE VA

Lab Number : 86771

Sample Id : B

REPORT OF ANALYSIS

Date Sampled: 3/12/2012 10:00:00

Date Received: 03/13/2012 00:00

Date Reported: 03/16/2012

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
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Comments:

NELAP ACCREDITED: VA NELAC CERT. # 489. RESULTS REPORTED MEET ALL REQUIREMENTS OF THE CURRENT NELAC STANDARDS, WHERE APPLICABLE. SULFUR NOT FOR COMPLIANCE PURPOSES.
SENDING MORE SAMPLE FOR ADDITIONAL TESTING

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

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Debbie Holt

REI Consultants, Inc.**Analytical Results**

Date: 19-Mar-12

CLIENT: TOWN OF BROADWAY**Client Sample ID:** SLUDGE 1**Project:****Site ID:****WorkOrder** 1203C45 **Lab ID** 1203C45-01A**DateReceived** 3/13/2012**Collection Date:** 3/13/2012 9:00:00 AM**Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	26,900	col/gram dry-wt		1,000	NA		03/14/12 8:35 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	14.5	wt%		0.01	NA		03/15/12 4:23 PM

Key: MCL Maximum Contaminant Level

MDL Minimum Detection Limit

NA Not Applicable

ND Not Detected at the PQL or MDL

PQL Practical Quantitation Limit

TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank

E Estimated Value above quantitation range

H Holding times for preparation or analysis exceeded

S Spike/Surrogate Recovery exceeds REIC control limits

* Value exceeds MCL or Regulatory Limits

Page 2 of 8

REI Consultants, Inc.**Analytical Results**

Date: 19-Mar-12

CLIENT: TOWN OF BROADWAY**WorkOrder** 1203C45 **Lab ID** 1203C45-02A**Client Sample ID:** SLUDGE 2**DateReceived** 3/13/2012**Project:****Collection Date:** 3/13/2012 9:15:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	13,800	col/gram dry-wt		1,000	NA		03/14/12 8:35 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	13.2	wt%		0.01	NA		03/15/12 4:23 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
• Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.

Analytical Results

Date: 19-Mar-12

CLIENT: TOWN OF BROADWAY

Client Sample ID: SLUDGE 3

Project:

Site ID:

WorkOrder 1203C45 Lab ID 1203C45-03A

DateReceived 3/13/2012

Collection Date: 3/13/2012 9:30:00 AM

Matrix: SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	124,000	col/gram dry-wt		1,000	NA		03/14/12 8:35 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	14.5	wt%		0.01	NA		03/15/12 4:23 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

Page 4 of 8

REI Consultants, Inc.
Analytical Results
Date: 19-Mar-12

CLIENT: TOWN OF BROADWAY

WorkOrder 1203C45 **Lab ID** 1203C45-04A

Client Sample ID: SLUDGE 4

DateReceived 3/13/2012

Project:
Collection Date: 3/13/2012 9:45:00 AM

Site ID:
Matrix: SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	104,000	col/gram dry-wt		1,000	NA		03/14/12 8:35 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	13.5	wt%		0.01	NA		03/15/12 4:23 PM

Key: MCL Maximum Contaminant Level
 MDL Minimum Detection Limit
 NA Not Applicable
 ND Not Detected at the PQL or MDL
 PQL Practical Quantitation Limit
 TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
 E Estimated Value above quantitation range
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate Recovery exceeds REIC control limits
 * Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.**Analytical Results**

Date: 19-Mar-12

CLIENT: TOWN OF BROADWAY**WorkOrder** 1203C45 **Lab ID** 1203C45-05A**Client Sample ID:** SLUDGE 5**DateReceived** 3/13/2012**Project:****Collection Date:** 3/13/2012 10:00:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	4,480	col/gram dry-wt		1,000	NA		03/14/12 8:35 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	14.2	wt%		0.01	NA		03/15/12 4:23 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.**Analytical Results****Date:** 19-Mar-12**CLIENT:** TOWN OF BROADWAY**Client Sample ID:** SLUDGE 6**Project:****Site ID:****WorkOrder** 1203C45 **Lab ID** 1203C45-06A**DateReceived** 3/13/2012**Collection Date:** 3/13/2012 10:15:00 AM**Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	23,500	col/gram dry-wt		1,000	NA		03/14/12 8:35 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	13.6	wt%		0.01	NA		03/15/12 4:23 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
• Value exceeds MCL or Regulatory Limits

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REI Consultants, Inc.
Analytical Results
Date: 19-Mar-12

CLIENT:	TOWN OF BROADWAY	WorkOrder	1203C45	Lab ID	1203C45-07A
Client Sample ID:	SLUDGE 7	DateReceived	3/13/2012		
Project:		Collection Date:	3/13/2012 10:30:00 AM		
Site ID:		Matrix:	SLUDGE		

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	6,480	col/gram dry-wt		1,000	NA		03/14/12 8:35 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	13.9	wt%		0.01	NA		03/15/12 4:23 PM

Key:	MCL	Maximum Contaminant Level	Qualifiers:	B	Analyte detected in the associated Method Blank	
	MDL	Minimum Detection Limit		E	Estimated Value above quantitation range	
	NA	Not Applicable		H	Holding times for preparation or analysis exceeded	
	ND	Not Detected at the PQL or MDL		S	Spike/Surrogate Recovery exceeds REIC control limits	
	PQL	Practical Quantitation Limit		*	Value exceeds MCL or Regulatory Limits	Page 8 of 8
	TIC	Tentatively Identified Compound, Estimated Concentration				

Report Number: 11-138-0204

Account Number: 70095

Submitted By: TIMOTHY GROVE

Send To: HOUFF FEED & FERT
97 RAILSIDE DR
WEYERS CAVE, VA 24486**A&L Eastern Laboratories, Inc.**

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Project : BROADWAY

Lab Number : 82439

Sample Id : 417

REPORT OF ANALYSIS

Date Sampled: 5/17/2011 12:30:00

Date Received: 05/18/2011 00:00

Date Reported: 05/20/2011

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	14.58	145800	100.0	BW	05/18/2011 15:00	SM-2540G
Moisture *	85.42		100.0	BW	05/18/2011 15:00	SM-2540G
Total Kjeldahl Nitrogen	6.43	64300	10.0	JM	05/19/2011 08:55	SM-4500-NH3C-TKN
Total Phosphorus	2.91	29100	100	KM	05/19/2011 12:54	SW 6010C
Total Potassium	0.88	8760	100	KM	05/19/2011 12:54	SW 6010C
Ammonia Nitrogen	0.25	2540	10.0	JM	05/19/2011 08:55	SM-4500-NH3C
Organic N	6.18	61760	10.0		05/19/2011 08:55	CALCULATION
Nitrate+Nitrite-N		134	1.00	JM	05/19/2011 08:25	SM-4500NO3F
pH (Standard Units) *	7.87			JM	05/19/2011 08:55	SW-9045D
Calcium Carbonate Equivalent	8.26	82600	100			AOAC 955.01
Total Volatile Solids	67.68	676800	100.0	BW	05/18/2011 15:00	SM-2540G

Comments:

NELAP ACCREDITED: VA NELAC CERT. # 489. RESULTS REPORTED MEET ALL REQUIREMENTS OF THE CURRENT NELAC STANDARDS, WHERE APPLICABLE.

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

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A handwritten signature in black ink that reads 'Debbie Holt'.

Debbie Holt

REI Consultants, Inc.**Analytical Results**

Date: 27-Sep-11

CLIENT: TOWN OF BROADWAY**WorkOrder** 1109K11 **Lab ID** 1109K11-01A**Client Sample ID:** PHOS SLUDGE**DateReceived** 9/21/2011**Project:****Collection Date:** 9/21/2011 9:30:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	ND	col/gram dry-wt		1,000	NA		09/22/11 9:00 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	14.0	wt%		0.01	NA		09/22/11 10:36 AM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

Page 2 of 5

REI Consultants, Inc.**Analytical Results**

Date: 27-Sep-11

CLIENT: TOWN OF BROADWAY**WorkOrder** 1109K11 **Lab ID** 1109K11-02A**Client Sample ID:** PHOS SLUDGE**DateReceived** 9/21/2011**Project:****Collection Date:** 9/21/2011 9:45:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	ND	col/gram dry-wt		1,000	NA		09/22/11 9:00 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	16.3	wt%		0.01	NA		09/22/11 10:36 AM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.
Analytical Results
Date: 27-Sep-11

CLIENT: TOWN OF BROADWAY

WorkOrder 1109K11 **Lab ID** 1109K11-03A

Client Sample ID: PHOS SLUDGE

DateReceived 9/21/2011

Project:
Collection Date: 9/21/2011 10:00:00 AM

Site ID:
Matrix: SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	ND	col/gram dry-wt		1,000	NA		09/22/11 9:00 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	13.5	wt%		0.01	NA		09/22/11 10:36 AM

Key: MCL Maximum Contaminant Level
 MDL Minimum Detection Limit
 NA Not Applicable
 ND Not Detected at the PQL or MDL
 PQL Practical Quantitation Limit
 TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
 E Estimated Value above quantitation range
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate Recovery exceeds REIC control limits
 * Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.**Analytical Results**

Date: 27-Sep-11

CLIENT: TOWN OF BROADWAY**Client Sample ID:** PHOS SLUDGE**Project:****Site ID:****WorkOrder** 1109K11 **Lab ID** 1109K11-04A**DateReceived** 9/21/2011**Collection Date:** 9/21/2011 10:15:00 AM**Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	ND	col/gram dry-wt		1,000	NA		09/22/11 9:00 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	14.0	wt%		0.01	NA		09/22/11 10:38 AM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
• Value exceeds MCL or Regulatory Limits

Page 5 of 5

REI Consultants, Inc.**Analytical Results**

Date: 28-Sep-11

CLIENT: TOWN OF BROADWAY**Client Sample ID:** PHOS SLUDGE**Project:****Site ID:****WorkOrder** 1109L55 **Lab ID** 1109L55-01A**DateReceived** 9/22/2011**Collection Date:** 9/22/2011 8:45:00 AM**Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	8,260	col/gram dry-wt		1,000	NA		09/23/11 8:40 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	13.2	wt%		0.01	NA		09/23/11 1:11 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.**Analytical Results**

Date: 28-Sep-11

CLIENT: TOWN OF BROADWAY**WorkOrder** 1109L55 **Lab ID** 1109L55-02A**Client Sample ID:** PHOS SLUDGE**DateReceived** 9/22/2011**Project:****Collection Date:** 9/22/2011 9:00:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	2,340	col/gram dry-wt		1,000	NA		09/23/11 8:40 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	12.8	wt%		0.01	NA		09/23/11 1:11 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

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REI Consultants, Inc.**Analytical Results**

Date: 28-Sep-11

CLIENT: TOWN OF BROADWAY**WorkOrder** 1109L55 **Lab ID** 1109L55-03A**Client Sample ID:** PHOS SLUDGE**DateReceived** 9/22/2011**Project:****Collection Date:** 9/22/2011 9:15:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	ND	col/gram dry-wt		1,000	NA		09/23/11 8:40 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	13.1	wt%		0.01	NA		09/23/11 1:11 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

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REI Consultants, Inc.

Analytical Results

Date: 12-May-11

CLIENT: TOWN OF BROADWAY

WorkOrder 1105435 Lab ID 1105435-01A

Client Sample ID: SLUDGE

DateReceived 5/4/2011

Project:

Collection Date: 5/4/2011 9:45:00 AM

Site ID:

Matrix: SLUDGE

Analyses	Result Units	Qual	PQL	MCL	Prep Date	Date Analyzed
CALCIUM CARBONATE EQUIVALENT		ASTM C25-99.33			Analyst: SR	
Calcium Carbonate Equivalent	5.25 wt%		0.100	NA		05/11/11 12:00 AM
TCLP METALS BY ICP		SW1311/6010C			Analyst: JD	
Arsenic	ND mg/L		0.500	5.00	05/06/11 12:27 PM	05/06/11 6:12 PM
Barium	ND mg/L		1.00	100	05/06/11 12:27 PM	05/06/11 6:12 PM
Cadmium	ND mg/L		0.050	1.00	05/06/11 12:27 PM	05/06/11 6:12 PM
Chromium	ND mg/L		0.500	5.00	05/06/11 12:27 PM	05/06/11 6:12 PM
Lead	ND mg/L		0.500	5.00	05/06/11 12:27 PM	05/06/11 6:12 PM
Selenium	ND mg/L		0.200	1.00	05/06/11 12:27 PM	05/06/11 6:12 PM
Silver	ND mg/L		0.100	5.00	05/06/11 12:27 PM	05/06/11 6:12 PM
METALS BY ICP		SW6010C			Analyst: LF	
Arsenic	ND mg/Kg		5.00	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Cadmium	0.514 mg/Kg		0.500	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Copper	189 mg/Kg		2.50	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Lead	9.03 mg/Kg		5.00	NA	05/06/11 12:00 PM	05/11/11 11:47 AM
Molybdenum	5.38 mg/Kg		2.50	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Nickel	18.1 mg/Kg		2.50	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Phosphorus	33,000 mg/Kg		1,250	NA	05/06/11 12:00 PM	05/11/11 11:50 AM
Potassium	9,400 mg/Kg		125	NA	05/06/11 12:00 PM	05/09/11 1:14 PM
Selenium	ND mg/Kg		5.00	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
Zinc	340 mg/Kg		1.25	NA	05/06/11 12:00 PM	05/09/11 1:04 PM
NOTES:						
Calculation of the percent recovery on the matrix spike for Potassium was not applicable since the spike added was <30% of the sample's background concentration.						
Calculation of the percent recovery on the matrix spike for Phosphorus was not applicable since the spike added was <30% of the sample's background concentration.						
TCLP MERCURY		SW1311/7470			Analyst: CGW	
Mercury	ND mg/L		0.0020	0.200	05/06/11 10:10 AM	05/10/11 11:28 AM
MERCURY, TOTAL		SW7471B			Analyst: CGW	
Mercury	0.185 mg/Kg		0.100	NA	05/06/11 12:30 PM	05/10/11 11:42 AM
TCLP PERCENT SOLIDS		SW1311			Analyst: KD	
Percent Solids	100 wt%		NA	NA	05/05/11 12:00 AM	05/05/11 5:00 PM
PAINT FILTER		E9095			Analyst: KD	
Paint Filter	negative NA		NA	NA	05/05/11 12:00 AM	05/05/11 2:00 PM
IGNITABILITY		ASTM D92			Analyst: TM	
Ignitability	No flash to 240 °F		NA	NA		05/11/11 12:00 AM

Key: MCL Maximum Contaminant Level
 MDL Minimum Detection Limit
 NA Not Applicable
 ND Not Detected at the PQL or MDL
 PQL Practical Quantitation Limit
 TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
 E Estimated Value above quantitation range
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate Recovery exceeds REIC control limits
 * Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.

Analytical Results

Date: 12-May-11

CLIENT: TOWN OF BROADWAY

WorkOrder 1105435 Lab ID 1105435-01A

Client Sample ID: SLUDGE

Date Received 5/4/2011

Project:

Collection Date: 5/4/2011 9:45:00 AM

Site ID:

Matrix: SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
TCLP HERBICIDES			SW1311/8151			Analyst: JC	
2,4,5-TP (Silvex)	ND	mg/L		0.0049	1.00	05/08/11 8:16 AM	05/09/11 7:22 PM
2,4-D	ND	mg/L		0.0098	10.0	05/08/11 8:16 AM	05/09/11 7:22 PM
Surr: DCAA	5.04	%REC		1-187	0.200	05/08/11 8:16 AM	05/09/11 7:22 PM
TCLP PESTICIDES			SW1311/8081			Analyst: JC	
Chlordane	ND	mg/L		0.0124	0.0300	05/10/11 8:15 AM	05/11/11 6:52 AM
Endrin	ND	mg/L		0.00124	0.0200	05/10/11 8:15 AM	05/11/11 6:52 AM
gamma-BHC	ND	mg/L		0.00124	0.400	05/10/11 8:15 AM	05/11/11 6:52 AM
Heptachlor	ND	mg/L		0.00124	0.00800	05/10/11 8:15 AM	05/11/11 6:52 AM
Heptachlor epoxide	ND	mg/L		0.00124	0.00800	05/10/11 8:15 AM	05/11/11 6:52 AM
Methoxychlor	ND	mg/L		0.00124	10.0	05/10/11 8:15 AM	05/11/11 6:52 AM
Toxaphene	ND	mg/L		0.0124	0.500	05/10/11 8:15 AM	05/11/11 6:52 AM
Surr: Tetrachloro-m-xylene	52.0	%REC		22.8-159	NA	05/10/11 8:15 AM	05/11/11 6:52 AM
PCBS			SW8082			Analyst: JC	
Aroclor 1016	ND	mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1221	ND	mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1232	ND	mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1242	ND	mg/Kg		0.0832	NA	05/08/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1248	ND	mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1254	ND	mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Aroclor 1260	ND	mg/Kg		0.0832	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
Surr: Tetrachloro-m-xylene	96.0	%REC		26.2-143	NA	05/09/11 11:33 AM	05/11/11 2:31 PM
NOTES:							
Elevated PQLs are due to matrix interference.							
TCLP SEMIVOLATILES			SW1311/8270D			Analyst: CLS	
o-cresol	ND	mg/L		0.025	200	05/09/11 8:37 AM	05/10/11 3:20 PM
m,p-cresol	ND	mg/L		0.025	200	05/09/11 8:37 AM	05/10/11 3:20 PM
1,4-Dichlorobenzene	ND	mg/L		0.025	7.50	05/09/11 8:37 AM	05/10/11 3:20 PM
2,4-Dinitrotoluene	ND	mg/L		0.025	0.130	05/09/11 8:37 AM	05/10/11 3:20 PM
Hexachlorobenzene	ND	mg/L		0.025	0.130	05/09/11 8:37 AM	05/10/11 3:20 PM
Hexachlorobutadiene	ND	mg/L		0.025	0.500	05/09/11 8:37 AM	05/10/11 3:20 PM
Hexachloroethane	ND	mg/L		0.025	3.00	05/09/11 8:37 AM	05/10/11 3:20 PM
Nitrobenzene	ND	mg/L		0.025	2.00	05/09/11 8:37 AM	05/10/11 3:20 PM
Pentachlorophenol	ND	mg/L		0.025	100	05/09/11 8:37 AM	05/10/11 3:20 PM
Pyridine	ND	mg/L		0.025	5.00	05/09/11 8:37 AM	05/10/11 3:20 PM
2,4,5-Trichlorophenol	ND	mg/L		0.025	400	05/09/11 8:37 AM	05/10/11 3:20 PM
2,4,6-Trichlorophenol	ND	mg/L		0.025	2.00	05/09/11 8:37 AM	05/10/11 3:20 PM
Surr: 2,4,6-Tribromophenol	79.2	%REC		63.8-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.

Analytical Results

Date: 12-May-11

CLIENT: TOWN OF BROADWAY

WorkOrder 1105435 Lab ID 1105435-01A

Client Sample ID: SLUDGE

Date Received 5/4/2011

Project:

Collection Date: 5/4/2011 9:45:00 AM

Site ID:

Matrix: SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
TCLP SEMI-VOLATILES		SW1311/8270D		Analyst: CLS			
Surr: 2-Fluorobiphenyl	76.0	%REC		58.6-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM
Surr: 2-Fluorophenol	48.1	%REC		32.9-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM
Surr: 4-Terphenyl-d14	72.9	%REC		55.1-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM
Surr: Nitrobenzene-d5	85.7	%REC		61.8-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM
Surr: Phenol-d5	41.6	%REC		25.8-110	NA	05/09/11 8:37 AM	05/10/11 3:20 PM
TCLP VOLATILE ORGANIC COMPOUNDS		SW1311/8260B		Analyst: AS			
Benzene	ND	mg/L		0.050	0.500		05/07/11 3:24 PM
Carbon tetrachloride	ND	mg/L		0.050	0.500		05/07/11 3:24 PM
Chlorobenzene	ND	mg/L		0.050	100		05/07/11 3:24 PM
Chloroform	ND	mg/L		0.050	6.00		05/07/11 3:24 PM
1,1-Dichloroethene	ND	mg/L		0.050	0.700		05/07/11 3:24 PM
1,2-Dichloroethane	ND	mg/L		0.050	0.500		05/07/11 3:24 PM
Methyl ethyl ketone	ND	mg/L		0.500	200		05/07/11 3:24 PM
Tetrachloroethene	ND	mg/L		0.050	0.700		05/07/11 3:24 PM
Trichloroethene	ND	mg/L		0.050	0.500		05/07/11 3:24 PM
Vinyl chloride	ND	mg/L		0.050	0.200		05/07/11 3:24 PM
Surr: 1,2-Dichloroethane-d4	117	%REC		80-120	NA		05/07/11 3:24 PM
Surr: 4-Bromofluorobenzene	112	%REC		86-115	NA		05/07/11 3:24 PM
Surr: Dibromofluoromethane	107	%REC		80-120	NA		05/07/11 3:24 PM
Surr: Toluene-d8	87.4	%REC		80-110	NA		05/07/11 3:24 PM
FECAL COLIFORM BY MEMBRANE FILTER		SM9222 D		Analyst: CC			
Fecal Coliform	20,200	col/gram dry-wt		1,000	NA		05/05/11 9:30 AM
SPECIFIC OXYGEN CONSUMPTION RATE		SM2710 B		Analyst: JJ			
SOCR	4	(mg/g)/hr		NA	NA		05/05/11 1:30 PM
ANIONS BY IC, WATER SOLUBLE		SW9056		Analyst: CW			
Nitrogen, Nitrate	2.60	mg/Kg		2.00	NA		05/05/11 8:37 PM
AMMONIA NITROGEN		SM4500-NH3 BE		Analyst: JL			
Nitrogen, Ammonia	378	mg/Kg		40.0	NA		05/10/11 11:15 AM
TOTAL KJELDAHL NITROGEN (TKN)		SM4500-NORGC		Analyst: JL			
Nitrogen, Kjeldahl, Total	9,560	mg/Kg		400	NA		05/10/11 7:00 AM
CYANIDE, REACTIVE		SW 7.3.3.2		Analyst: PF			
Reactive Cyanide	ND	mg/Kg		5.0	NA		05/11/11 12:00 AM
SULFIDE, REACTIVE		SW 7.3.4.2		Analyst: PF			
Reactive Sulfide	ND	mg/Kg		50	NA		05/11/11 1:45 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.**Analytical Results**

Date: 12-May-11

CLIENT: TOWN OF BROADWAY**Client Sample ID:** SLUDGE**Project:****Site ID:****WorkOrder** 1105435 **Lab ID** 1105435-01A**DateReceived** 5/4/2011**Collection Date:** 5/4/2011 9:45:00 AM**Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	17.8	wt%		0.01	NA		05/06/11 9:21 AM
TOTAL VOLATILE SOLIDS			SM2540 G			Analyst: SF	
Total Volatile Solids	65.8	wt%		1.00	NA		05/06/11 5:03 PM
PH			SW9045D			Analyst: DSD	
pH	6.46	SU		NA	NA		05/05/11 4:00 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.**Analytical Results**

Date: 23-May-11

CLIENT: TOWN OF BROADWAY**WorkOrder** 1105H18 **Lab ID** 1105H18-01A**Client Sample ID:** SLUDGE**DateReceived** 5/18/2011**Project:****Collection Date:** 5/18/2011 10:00:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
OIL AND GREASE			E1664A			Analyst: JL	
Oil & Grease	ND	mg/L		5.0	NA		05/23/11 8:30 AM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.**Analytical Results**

Date: 16-May-11

CLIENT: TOWN OF BROADWAY**WorkOrder** 1105906 **Lab ID** 1105906-01A**Client Sample ID:** PRESSED SLUDGE**DateReceived** 5/10/2011**Project:****Collection Date:** 5/10/2011 11:15:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	10,500	col/gram dry-wt		1,000	NA		05/11/11 10:48 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	15.6	wt%		0.01	NA		05/11/11 1:15 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

Page 2 of 3

REI Consultants, Inc.**Analytical Results**

Date: 16-May-11

CLIENT: TOWN OF BROADWAY**WorkOrder** 1105906 **Lab ID** 1105906-02A**Client Sample ID:** PRESSED SLUDGE**DateReceived** 5/10/2011**Project:****Collection Date:** 5/10/2011 11:30:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	12,500	col/gram dry-wt		1,000	NA		05/11/11 10:48 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	18.4	wt%		0.01	NA		05/11/11 1:15 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.**Analytical Results**

Date: 16-May-11

CLIENT: TOWN OF BROADWAY**Client Sample ID:** PRESSED SLUDGE**Project:****Site ID:****WorkOrder** 1105A87 **Lab ID** 1105A87-01A**DateReceived** 5/11/2011**Collection Date:** 5/11/2011 10:15:00 AM**Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	23,500	col/gram dry-wt		1,000	NA		05/12/11 9:51 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	17.0	wt%		0.01	NA		05/12/11 10:48 AM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.**Analytical Results**

Date: 16-May-11

CLIENT: TOWN OF BROADWAY**WorkOrder** 1105A87 **Lab ID** 1105A87-02A**Client Sample ID:** PRESSED SLUDGE**DateReceived** 5/11/2011**Project:****Collection Date:** 5/11/2011 10:30:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	10,400	col/gram dry-wt		1,000	NA		05/12/11 9:51 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	19.2	wt%		0.01	NA		05/12/11 10:48 AM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

Page 3 of 3

REI Consultants, Inc.**Analytical Results**

Date: 17-May-11

CLIENT: TOWN OF BROADWAY**Client Sample ID:** PRESSED SLUDGE**Project:****Site ID:****WorkOrder** 1105C67 **Lab ID** 1105C67-01A**DateReceived** 5/12/2011**Collection Date:** 5/12/2011 9:45:00 AM**Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	14,800	col/gram dry-wt		1,000	NA		05/13/11 9:00 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	17.6	wt%		0.01	NA		05/14/11 10:15 AM

Key: MCL Maximum Contaminant Level

MDL Minimum Detection Limit

NA Not Applicable

ND Not Detected at the PQL or MDL

PQL Practical Quantitation Limit

TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank

E Estimated Value above quantitation range

H Holding times for preparation or analysis exceeded

S Spike/Surrogate Recovery exceeds REIC control limits

* Value exceeds MCL or Regulatory Limits

Page 2 of 3

REI Consultants, Inc.**Analytical Results**

Date: 17-May-11

CLIENT: TOWN OF BROADWAY**WorkOrder** 1105C67 **Lab ID** 1105C67-02A**Client Sample ID:** PRESSED SLUDGE**DateReceived** 5/12/2011**Project:****Collection Date:** 5/12/2011 10:00:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	6,200	col/gram dry-wt		1,000	NA		05/13/11 9:00 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	17.6	wt%		0.01	NA		05/14/11 10:15 AM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
• Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.**Analytical Results**

Date: 23-May-11

CLIENT: TOWN OF BROADWAY**WorkOrder** 1105F47 **Lab ID** 1105F47-01A**Client Sample ID:** PRESSED SLUDGE**DateReceived** 5/17/2011**Project:****Collection Date:** 5/17/2011 11:00:00 AM**Site ID:****Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	129,000	col/gram dry-wt		1,000	NA		05/18/11 10:48 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	14.6	wt%		0.01	NA		05/19/11 10:13 AM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

Page 2 of 3

REI Consultants, Inc.**Analytical Results**

Date: 23-May-11

CLIENT: TOWN OF BROADWAY**Client Sample ID:** PRESSED SLUDGE**Project:****Site ID:****WorkOrder** 1105F47 **Lab ID** 1105F47-02A**DateReceived** 5/17/2011**Collection Date:** 5/17/2011 11:15:00 AM**Matrix:** SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
FECAL COLIFORM BY MEMBRANE FILTER			SM9222 D			Analyst: CC	
Fecal Coliform	51,500	col/gram dry-wt		1,000	NA		05/18/11 10:48 AM
SOLIDS, TOTAL			SM2540 G			Analyst: SF	
Total Solids	15.0	wt%		0.01	NA		05/19/11 10:13 AM

Key: MCL Maximum Contaminant Level

MDL Minimum Detection Limit

NA Not Applicable

ND Not Detected at the PQL or MDL

PQL Practical Quantitation Limit

TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank

E Estimated Value above quantitation range

H Holding times for preparation or analysis exceeded

S Spike/Surrogate Recovery exceeds REIC control limits

* Value exceeds MCL or Regulatory Limits

Page 3 of 3

Report Number: 10-232-0201
 Account Number: 00111
 Submitted By: LEE GRIECO



A&L Eastern Laboratories, Inc.

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-8446

Send To: Town of Broadway
 POB 156
 Broadway, VA 22815

Project : STORAGE RESERVOIR SLUDGE

REPORT OF ANALYSIS

Date Sampled: 8/19/2010 09:00:00

Date Received: 08/20/2010 00:00

Date Reported: 08/25/2010

Lab Number : 78008

Sample Id : STORAGE RESERVOIR SLUDGE

PARAMETER	RESULT (%)	RESULT (mg/kg)	DETECTION LIMIT (mg/kg*)	ANALYST	ANALYSIS DATE/TIME	METHOD
Total Solids *	11.13	111300	100.0	JM	08/20/2010 14:15	SM-2540G
Moisture *	88.87		100.0	JM	08/20/2010 14:15	SM-2540G
Total Kjeldahl Nitrogen	4.49	44900	10.0	JM	08/23/2010 08:19	SM-4500-NH3C-TKN
Total Phosphorus	5.06	50600	100	KM	08/23/2010 09:30	SW 6010C
Total Potassium	0.18	1840	100	KM	08/23/2010 09:30	SW 6010C
Total Copper		326	1	KM	08/23/2010 09:30	SW 6010C
Total Zinc		864	1	KM	08/23/2010 09:30	SW 6010C
Ammonia Nitrogen	0.33	3320	10.0	JM	08/23/2010 08:19	SM-4500-NH3C
Organic N	4.16	41580	10.0		08/23/2010 08:19	CALCULATION
Nitrate+Nitrite-N		<1.00	1.00	JM	08/23/2010 08:20	SM-4500NO3F
Total Cadmium		1.0	1.0	KM	08/23/2010 09:30	SW 6010C
Total Chromium		73	5	KM	08/23/2010 09:30	SW 6010C
Total Nickel		21	5	KM	08/23/2010 09:30	SW 6010C
Total Lead		11	5	KM	08/23/2010 09:30	SW 6010C
Total Arsenic		6.0	1.0	KM	08/23/2010 09:30	SW 6010C
Total Mercury		0.6	0.4	KM	08/23/2010 10:45	SW-7471B
Total Selenium		5.0	1.0	KM	08/23/2010 09:30	SW 6010C
pH (as received) *	6.84			JM	08/23/2010 08:20	SW-9045D

All values are on a dry weight basis except as noted by asterisk. Detection limit on all N series is on a wet basis.

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Paucic McGeary

Paucic McGeary

REI Consultants, Inc.

Analytical Results

Date: 18-Oct-10

CLIENT: TOWN OF BROADWAY

WorkOrder 1010372 Lab ID 1010372-01A

Client Sample ID: ALUM SLUDGE

Date Received 10/5/2010

Project:

Collection Date: 10/4/2010 10:45:00 AM

Site ID:

Matrix: SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
TCLP METALS BY ICP		SW1311/6010C		Analyst: JD			
Arsenic	ND	mg/L		0.500	5.00	10/07/10 7:32 AM	10/07/10 6:12 PM
Barium	ND	mg/L		1.00	100	10/07/10 7:32 AM	10/07/10 6:12 PM
Cadmium	ND	mg/L		0.050	1.00	10/07/10 7:32 AM	10/07/10 6:12 PM
Chromium	ND	mg/L		0.500	5.00	10/07/10 7:32 AM	10/07/10 6:12 PM
Lead	ND	mg/L		0.500	5.00	10/07/10 7:32 AM	10/07/10 6:12 PM
Selenium	ND	mg/L		0.200	1.00	10/07/10 7:32 AM	10/07/10 6:12 PM
Silver	ND	mg/L		0.100	5.00	10/07/10 7:32 AM	10/07/10 6:12 PM
TCLP MERCURY		SW1311/7470		Analyst: CGW			
Mercury	ND	mg/L		0.0020	0.200	10/07/10 12:35 PM	10/08/10 11:19 AM
TCLP PERCENT SOLIDS		SW1311		Analyst: KD			
Percent Solids	100	wt%		NA	NA	10/08/10 12:00 AM	10/08/10 8:15 PM
PAINT FILTER		E9095		Analyst: KD			
Paint Filter	negative	NA		NA	NA	10/06/10 12:00 AM	10/06/10 10:00 AM
IGNITABILITY		ASTM D92		Analyst: TM			
Ignitability	NO flash to 225 °F			NA	NA		10/13/10 12:00 AM
TCLP HERBICIDES		SW1311/8151		Analyst: JC			
2,4,5-TP (Silver)	ND	mg/L		0.0043	1.00	10/11/10 12:44 PM	10/13/10 12:21 PM
2,4-D	ND	mg/L		0.0086	10.0	10/11/10 12:44 PM	10/13/10 12:21 PM
Surr: DCAA	16.1	%REC		1-187	0.200	10/11/10 12:44 PM	10/13/10 12:21 PM
TCLP PESTICIDES		SW1311/8081		Analyst: JC			
Chlordane	ND	mg/L		0.0124	0.0300	10/11/10 8:52 AM	10/15/10 5:11 PM
Endrin	ND	mg/L		0.00124	0.0200	10/11/10 8:52 AM	10/15/10 5:11 PM
gamma-BHC	ND	mg/L		0.00124	0.400	10/11/10 8:52 AM	10/15/10 5:11 PM
Heptachlor	ND	mg/L		0.00124	0.00800	10/11/10 8:52 AM	10/15/10 5:11 PM
Heptachlor epoxide	ND	mg/L		0.00124	0.00800	10/11/10 8:52 AM	10/15/10 5:11 PM
Methoxychlor	ND	mg/L		0.00124	10.0	10/11/10 8:52 AM	10/15/10 5:11 PM
Toxaphene	ND	mg/L		0.0124	0.500	10/11/10 8:52 AM	10/15/10 5:11 PM
Surr: Tetrachloro-m-xylene	81.5	%REC		22.8-159	NA	10/11/10 8:52 AM	10/15/10 5:11 PM
PCBS		SW8082		Analyst: JC			
Aroclor 1016	ND	mg/Kg		0.0167	NA	10/08/10 8:40 AM	10/08/10 5:48 PM
Aroclor 1221	ND	mg/Kg		0.0167	NA	10/08/10 8:40 AM	10/08/10 5:48 PM
Aroclor 1232	ND	mg/Kg		0.0167	NA	10/08/10 8:40 AM	10/08/10 5:48 PM
Aroclor 1242	ND	mg/Kg		0.0167	NA	10/08/10 8:40 AM	10/08/10 5:48 PM
Aroclor 1248	ND	mg/Kg		0.0167	NA	10/08/10 8:40 AM	10/08/10 5:48 PM

Key: MCL Maximum Contaminant Level
 MDL Minimum Detection Limit
 NA Not Applicable
 ND Not Detected at the PQL or MDL
 PQL Practical Quantitation Limit
 TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
 E Estimated Value above quantitation range
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate Recovery exceeds REIC control limits
 * Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.

Analytical Results

Date: 18-Oct-10

CLIENT: TOWN OF BROADWAY

WorkOrder 1010372 Lab ID 1010372-01A

Client Sample ID: ALUM SLUDGE

Date Received 10/5/2010

Project:

Collection Date: 10/4/2010 10:45:00 AM

Site ID:

Matrix: SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
PCBS		SW8082		Analyst: JC			
Aroclor 1254	ND	mg/Kg		0.0167	NA	10/08/10 8:40 AM	10/08/10 5:48 PM
Aroclor 1260	ND	mg/Kg		0.0167	NA	10/08/10 8:40 AM	10/08/10 5:48 PM
Surr: Tetrachloro-m-xylene	92.4	%REC		37.7-188	NA	10/08/10 8:40 AM	10/08/10 5:48 PM
TCLP SEMIVOLATILES		SW1311/8270D		Analyst: CLS			
o-cresol	ND	mg/L		0.024	200	10/08/10 6:23 AM	10/12/10 9:28 PM
m,p-cresol	ND	mg/L		0.024	200	10/08/10 6:23 AM	10/12/10 9:28 PM
1,4-Dichlorobenzene	ND	mg/L		0.024	7.50	10/08/10 6:23 AM	10/12/10 9:28 PM
2,4-Dinitrotoluene	ND	mg/L		0.024	0.130	10/08/10 6:23 AM	10/12/10 9:28 PM
Hexachlorobenzene	ND	mg/L		0.024	0.130	10/08/10 6:23 AM	10/12/10 9:28 PM
Hexachlorobutadiene	ND	mg/L		0.024	0.500	10/08/10 6:23 AM	10/12/10 9:28 PM
Hexachloroethane	ND	mg/L		0.024	3.00	10/08/10 6:23 AM	10/12/10 9:28 PM
Nitrobenzene	ND	mg/L		0.024	2.00	10/08/10 6:23 AM	10/12/10 9:28 PM
Pentachlorophenol	ND	mg/L		0.024	100	10/08/10 6:23 AM	10/12/10 9:28 PM
Pyridine	ND	mg/L		0.024	5.00	10/08/10 6:23 AM	10/12/10 9:28 PM
2,4,5-Trichlorophenol	ND	mg/L		0.024	400	10/08/10 6:23 AM	10/12/10 9:28 PM
2,4,6-Trichlorophenol	ND	mg/L		0.024	2.00	10/08/10 6:23 AM	10/12/10 9:28 PM
Surr: 2,4,6-Tribromophenol	119	%REC	S	53-110	NA	10/08/10 6:23 AM	10/12/10 9:28 PM
Surr: 2-Fluorobiphenyl	88.9	%REC		39-127	NA	10/08/10 6:23 AM	10/12/10 9:28 PM
Surr: 2-Fluorophenol	64.5	%REC		37-110	NA	10/08/10 6:23 AM	10/12/10 9:28 PM
Surr: 4-Terphenyl-d14	83.2	%REC		54-110	NA	10/08/10 6:23 AM	10/12/10 9:28 PM
Surr: Nitrobenzene-d5	114	%REC	S	52-110	NA	10/08/10 6:23 AM	10/12/10 9:28 PM
Surr: Phenol-d5	80.6	%REC		28-110	NA	10/08/10 6:23 AM	10/12/10 9:28 PM
TCLP VOLATILE ORGANIC COMPOUNDS		SW1311/8260B		Analyst: SDG			
Benzene	ND	mg/L		0.050	0.500		10/08/10 4:03 PM
Carbon tetrachloride	ND	mg/L		0.050	0.500		10/08/10 4:03 PM
Chlorobenzene	ND	mg/L		0.050	100		10/08/10 4:03 PM
Chloroform	ND	mg/L		0.050	8.00		10/08/10 4:03 PM
1,1-Dichloroethene	ND	mg/L		0.050	0.700		10/08/10 4:03 PM
1,2-Dichloroethane	ND	mg/L		0.050	0.500		10/08/10 4:03 PM
Methyl ethyl ketone	ND	mg/L		0.500	200		10/08/10 4:03 PM
Tetrachloroethene	ND	mg/L		0.050	0.700		10/08/10 4:03 PM
Trichloroethene	ND	mg/L		0.050	0.500		10/08/10 4:03 PM
Vinyl chloride	ND	mg/L		0.050	0.200		10/08/10 4:03 PM
Surr: 1,2-Dichloroethane-d4	120	%REC		80-120	NA		10/08/10 4:03 PM
Surr: 4-Bromofluorobenzene	97.0	%REC		86-115	NA		10/08/10 4:03 PM
Surr: Dibromofluoromethane	104	%REC		80-120	NA		10/08/10 4:03 PM
Surr: Toluene-d8	101	%REC		80-110	NA		10/08/10 4:03 PM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

REI Consultants, Inc.

Analytical Results

Date: 18-Oct-10

CLIENT: TOWN OF BROADWAY

WorkOrder 1010372 Lab ID 1010372-01A

Client Sample ID: ALUM SLUDGE

DateReceived 10/5/2010

Project:

Collection Date: 10/4/2010 10:45:00 AM

Site ID:

Matrix: SLUDGE

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
CYANIDE, REACTIVE			SW 7.3.3.2			Analyst: BA	
Reactive Cyanide	ND	mg/Kg		5.0	NA		10/11/10 12:30 PM
SULFIDE, REACTIVE			SW 7.3.4.2			Analyst: BA	
Reactive Sulfide	ND	mg/Kg		50	NA		10/12/10 10:00 AM
PH			SW9045C			Analyst: DSD	
pH	6.31	SU		NA	NA		10/08/10 10:50 AM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

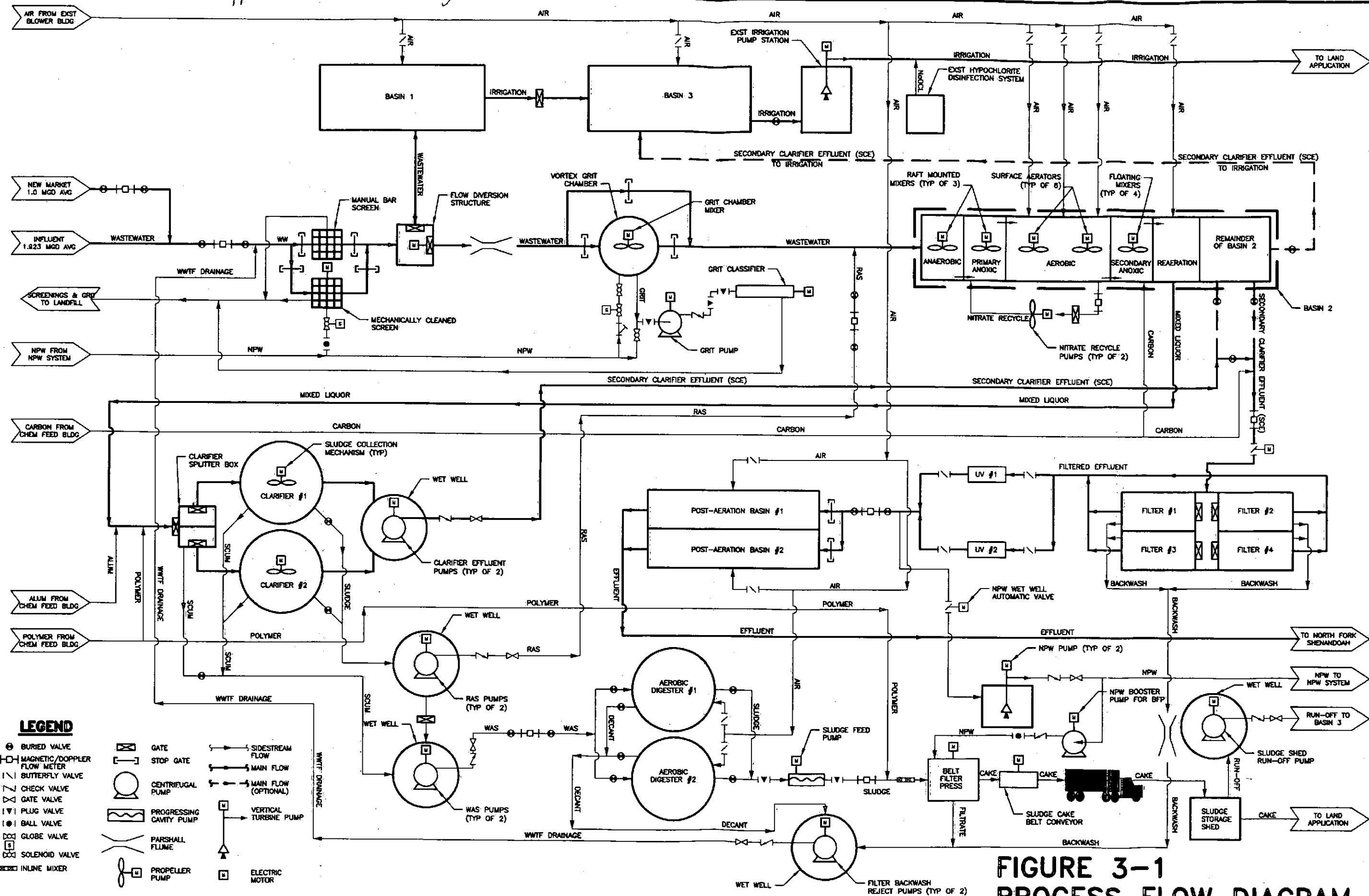
Qualifiers: B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery exceeds REIC control limits
* Value exceeds MCL or Regulatory Limits

Page 4 of 4

Reissuance of VPDES Permit No. VA 0090263—BWTF

Appendix C
Process Flow Diagram

Appendix C: Flow Diagram



**FIGURE 3-1
PROCESS FLOW DIAGRAM**

BROADWAY REGIONAL
WASTEWATER TREATMENT FACILITY

TOWN OF BROADWAY

SCALE: NO SCALE

SHEET REFERENCE: FIG. 3-1

AECOM
1315 PINEHURST ROAD
BROADWAY, NY 12016
(518) 487-3100

AECOM

Appendix D
Waste Characterization

- a. Wastewater General Analysis**
- b. Sludge Analysis**
- c. Wastewater Analysis of Special Parameters
Sludge Analysis of Special Parameters**

Appendix D

4. Waste Characterization

- a. *Wastewater - Provide at least one analysis for each parameter. Upon review, additional analyses may be required by DEQ.*

Parameter	Concentration	
Flow to treatment	1.885	MGD
Flow to storage	0.214	MGD
Vol. to treatment	686.569	MG
Vol. to storage	79.032	MG
Vol. Land applied	26.784	MG/year
BOD ₅	7.4	mg/l
COD	41.8	mg/l
TOC	11.7	mg/l
TSS	13.4	mg/l
Percent Solids	0.00134	%
pH	7.45	S.U.
Alkalinity as CaCO ₃	220	mg/l
Nitrogen, (Nitrate)	0.34	mg/l
Nitrogen, (Ammonium)	2.87	mg/l
Nitrogen, (Total Kjeldahl)	4.17	mg/l
Phosphorus, (Total)	2.44	mg/l
Potassium, (Total)	38.4	mg/l
Sodium	126.4	mg/l

- b. *Sludge - Provide at least one analysis for each parameter. Upon review, additional analyses may be required by DEQ.*

Parameter	Concentration*	
Percent Solids	14.6	%
Volatile Solids	66.6	%
pH	7.07	S.U.
Alkalinity as CaCO ₃ **	70,500	mg/kg
Nitrogen (Nitrate)	492	mg/kg
Nitrogen (Ammonium)	2640	mg/kg
Nitrogen (Total Kjeldahl)	39,915	mg/kg
Phosphorous (Total)	26,600	mg/kg
Potassium (Total)	6628	mg/kg
Lead	9.0	mg/kg
Cadmium	0.33	mg/kg
Copper	289	mg/kg
Nickel	17.3	mg/kg
Zinc	662	mg/kg

* Unless otherwise noted, report results on dry weight basis.

** Lime treated sludges (10% or more lime by dry weight) should be analyzed for percent CaCO₃.

Appendix D

Irrigation Water

- c. Provide a separate waste characterization listing for each wastewater and sludge generated at the facility. Insert "Yes" beside all parameters believed present and provide at least one analysis for each. Insert "No" beside all parameters believed not present. Indicate "NA" for any parameter already addressed in Item 4a. or 4b.

Parameter	Believed Present (yes or no)	Concentration*
Sodium	Y	106.4 mg/L
Bromide	N	
Total Residual	Y	2.19 mg/L
Chlorine	N	
Fecal Coliform	N	
Fluoride	Y	< 0.20 mg/L
Oil & Grease	Y	< 5.0 mg/L
Total		
Radioactivity	N	
Total Alpha	N	
Total Beta	N	
Total Radium	N	
Total Radium 226	N	
Sulfate (as SO ₄)	Y	113.8 mg/L
Sulfide (as S)	N	
Sulfite (as SO ₃)	N	
Surfactants	N	
Total Aluminum	Y	< 0.100 mg/L
Total Barium	N	
Total Boron	Y	< 0.100 mg/L
Total Cobalt	N	
Total Iron	N	
Total Magnesium	Y	36.8 mg/L
Total Molybdenum	Y	< 0.100 mg/L
Total Manganese	N	
Total Tin	N	
Total Titanium	N	
Total Antimony	N	
Total Arsenic	Y	< 0.200 mg/L
Total Beryllium	N	
Total Cadmium	Y	< 0.020 mg/L
Total Chromium	Y	< 0.100 mg/L
Total Copper	Y	< 0.100 mg/L
Total Lead	Y	< 0.200 mg/L
Total Mercury	Y	< 0.001 mg/L
Total Nickel	Y	< 0.100 mg/L
Total Selenium	Y	< 0.200 mg/L
Total Silver	N	
Total Thallium	N	
Total Zinc	Y	< 0.050 mg/L
Total Cyanide	N	
Total Phenols	Y	< 0.0103 mg/L
Dioxin	N	
Acrolein	N	

*if the analysis is for sludge, report results on dry weight basis.

Appendix D

C. (Continued)

Irrigation Water

Parameter	Believed Present (yes or no)	Concentration
Acrylonitrile	N	
Benzene		
Bis(Chloromethyl)Ether		
Bromoform		
Carbon Tetrachloride		
Chlorobenzene		
Chlorodibromomethane		
Chloroethane		
2-Chloroethylvinyl Ether		
Chloroform		
Dichlorobromomethane		
Dichlorodifluoromethane		
1,1-Dichloroethane		
1,2-Dichloroethane		
1,1-Dichloroethylene		
1,2-Dichloropropane		
1,3-Dichloropropylene		
Ethylbenzene		
Methyl Bromide		
Methyl Chloride		
Methylene Chloride		
1,1,2,2-Tetrachloroethane		
Tetrachloroethylene		
Toluene		
1,2-TransDichloroethylene1		
1,1,-Trichloroethane		
1,1,2,-Trichloroethane		
Trichloroethylene		
Trichlorofluoromethane		
Vinyl Chloride		
2-Chlorophenol		
2,4-Dichlorophenol		
2,4-Dimethylphenol		
4,6-Dinitro-O-Cresol		
2,4-Dinitrophenol		
2-Nitrophenol		
4-Nitrophenol		
P-Chlor-M-Cresol		
Pentachlorophenol		
Phenol		
2,4,6-Trichlorophenol		
Acenaphthene		
Acenaphthylene		
Acenaphthylene		
Benzidine		
Benzo(a)Athrane		
Benzo(a)Pyrene		
3,4-Benzofluoranthene		
Benzo(ghi) Perylene		
Benzo(k)Fluoranthene		
Bis(2-Chloroethoxy)Methane		
Bis(2-Chloroethyl) Ether		
Bis(2-Chloroisopropyl)Ether		
Bis(2-Ethylhexyl)Phthalate		
4-Bromophenyl Phenyl Ether		
Butyl Benzyl Phthalate		
4-Chlorophenyl Phenyl Ether		
2-Chloronaphthalene		
Chrysene		
Dibenzo(a,h) Anthracene		

c. (Continued)

Appendix D

Irrigation Water

<u>Parameter</u>	<u>Believed Present</u> (yes or no)	<u>Concentration</u>
1,2-Dichlorobenzene	N	
1,3-Dichlorobenzene		
1,4-Dichlorobenzene		
3,3'-Dichlorobenzidine		
Diethyl Phthalate		
Dimethyl Phthalate		
Di-N-Butyl Phthalate		
2,4-Dinitrotoluene		
2,6-Dinitrotoluene		
Di-N-Octyl Phthalate		
1,2-Diphenylhydrazine(as Azobenzene)		
Fluoranthene		
Fluorene		
Hexachlorobenzene		
Hexachlorobutadiene		
Hexachlorocyclopentadiene		
Hexachloroethane		
Indeno(1,2,3-cd)Pyrene		
Isophorone		
Naphthalene		
Nitrobenzene		
N-Nitrosodimethylamine		
N-Nitrosodi-N-Propylamine		
N-Nitrosodiphenylamine		
Phenanthrene		
Pyrene		
1,2,4 - Trichlorobenzene		
Aldrin		
α- BHC		
β- BHC		
γ- BHC		
δ- BHC		
Chlordane		
4,4'- DDT		
4,4'- DDE		
4,4'- DDD		
Dieldrin		
α-Endosulfan		
β-Endosulfan		
Endosulfan Sulfate		
Endrin		
Endrin Aldehyde		
Heptachlor		
Heptachlor Epoxide		
PCB - 1242		
PCB - 1254		
PCB - 1221		
PCB - 1232		
PCB - 1248		
PCB - 1260		
PCB - 1016		
Toxaphene		
Chloromethane		
Chlorpyrifos		
Demeton		
Dichloromethane		
(2,4-dichlorophenoxy) acetic acid (2,4-D)		
Di-2-Ethylhexyl Phthalate		
MBAS	✓	

Appendix D

Irrigation Water

Irrigation Water

c. (Continued)

Parameter	Believed Present (yes or no)	Concentration
Lindane	N	
Hydrogen Sulfide		
Silvex		
Tributyltin		
Kepone		
Malathion		
Methoxychlor		
Mirex		
Monochlorobenzene		
Parathion	Y	

d. Provide a separate waste characterization listing for each wastewater and sludge generated at the facility. List any additional parameters believed present in the spaces provided below and provide at least one analysis for each.

[illegible]

5. Briefly describe the design and provide a line drawing of the waste treatment facility which relates the various components of the treatment system including source(s), treatment unit(s), disposal alternatives, and flow estimates from the various process units.

Appendix D

Sludge

- c. Provide a separate waste characterization listing for each wastewater and sludge generated at the facility. Insert "Yes" beside all parameters believed present and provide at least one analysis for each. Insert "No" beside all parameters believed not present. Indicate "NA" for any parameter already addressed in Item 4a. or 4b.

Parameter	Believed Present (yes or no)	Concentration*
Sodium	Y	1740 mg/kg
Bromide	N	
Total Residual Chlorine	N	
Fecal Coliform	Y	22,241 col/g-on wt
Fluoride	Y	
Oil & Grease	N	<5.0 mg/L
Total Radioactivity	N	
Total Alpha	N	
Total Beta	N	
Total Radium	N	
Total Radium 226	N	
Sulfate (as SO ₄)	Y	<37.5
Sulfide (as S)	N	
Sulfite (as SO ₃)	N	
Surfactants	N	
Total Aluminum	Y	41,800 mg/kg
Total Barium	N	<0.5 mg/L
Total Boron	N	
Total Cobalt	N	
Total Iron	N	
Total Magnesium	Y	5100 mg/kg
Total Molybdenum	N	6.1 mg/kg
Total Manganese	N	
Total Tin	N	
Total Titanium	N	
Total Antimony	N	
Total Arsenic	N	4.7 mg/kg
Total Beryllium	N	
Total Cadmium	N	0.83 mg/kg
Total Chromium	N	<0.03 mg/L
Total Copper	Y	289 mg/kg
Total Lead	Y	9.0 mg/kg
Total Mercury	Y	0.29 mg/kg
Total Nickel	Y	17.2 mg/kg
Total Selenium	N	4.5 mg/kg
Total Silver	N	<0.5 mg/L
Total Thallium	N	
Total Zinc	Y	662 mg/kg
Total Cyanide	N	<2.5 mg/kg
Total Phenols	N	
Dioxin	N	
Aroclor	N	

*if the analysis is for sludge, report results on dry weight basis.

Appendix D

Sludge

C. (Continued)

Parameter	Believed Present (yes or no)	Concentration
Acrylonitrile	N	
Benzene	N	< 0.050 mg/L
Bis(Chloromethyl)Ether	N	
Bromoform	N	
Carbon Tetrachloride	N	< 0.050 mg/L
Chlorobenzene	N	< 0.050 mg/L
Chlorodibromomethane	N	
Chloroethane	N	< 0.050 mg/L
2-Chloroethylvinyl Ether	N	
Chloroform	N	< 0.050 mg/L
Dichlorobromomethane	N	
Dichlorodifluoromethane	N	
1,1-Dichloroethane	N	< 0.050 mg/L
1,2-Dichloroethane	N	< 0.050 mg/L
1,1-Dichloroethylene	N	
1,2-Dichloropropane	N	
1,3-Dichloropropylene	N	
Ethylbenzene	N	
Methyl Bromide	N	
Methyl Chloride	N	
Methylene Chloride	N	
1,1,2,2-Tetrachloroethane	N	< 0.050 mg/L
Tetrachloroethylene	N	< 0.050 mg/L
Toluene	N	
1,2-TransDichloroethylene1	N	
1,1,-Trichloroethane	N	
1,1,2,-Trichloroethane	N	
Trichloroethylene	N	
Trichlorofluoromethane	N	
Vinyl Chloride	N	< 0.050 mg/L
2-Chlorophenol	N	
2,4-Dichlorophenol	N	
2,4-Dimethylphenol	N	
4,6-Dinitro-O-Cresol	N	
2,4-Dinitrophenol	N	
2-Nitrophenol	N	
4-Nitrophenol	N	
P-Chlor-M-Cresol	N	
Pentachlorophenol	N	< 0.025 mg/L
Phenol	N	
2,4,6-Trichlorophenol	N	< 0.025 mg/L
Acenaphthene	N	
Acenaphthylene	N	
Acenaphthylene	N	
Benzidine	N	
Benzo(a)Anthracene	N	
Benzo(a)Pyrene	N	
3,4-Benzofluoranthene	N	
Benzo(ghi) Perylene	N	
Benzo(k) Fluoranthene	N	
Bis(2-Chloroethoxy)Methane	N	
Bis(2-Chloroethyl) Ether	N	
Bis(2-Chloroisopropyl)Ether	N	
Bis(2-Ethylhexyl)Phthalate	N	
4-Bromophenyl Phenyl Ether	N	
Butyl Benzyl Phthalate	N	
4-Chlorophenyl Phenyl Ether	N	
2-Chloronaphthalene	N	
Chrysene	N	
Dibenzo(a,h) Anthracene	N	

Appendix D

Sudge

c. (Continued)

Parameter	Believed Present (yes or no)	Concentration
1,2-Dichlorobenzene	N	
1,3-Dichlorobenzene	N	
1,4-Dichlorobenzene	N	< 0.025 mg/L
3,3'-Dichlorobenzidine	N	
Diethyl Phthalate	N	
Dimethyl Phthalate	N	
Di-N-Butyl Phthalate	N	
2,4-Dinitrotoluene	N	< 0.025 mg/L
2,6-Dinitrotoluene	N	
Di-N-Octyl Phthalate	N	
1,2-Diphenylhydrazine(as Azobenzene)	N	
Fluoranthene	N	
Fluorene	N	
Hexachlorobenzene	N	< 0.025 mg/L
Hexachlorobutadiene	N	< 0.025 mg/L
Hexachlorocyclopentadiene	N	
Hexachloroethane	N	< 0.025 mg/L
Indeno(1,2,3-cd)Pyrene	N	
Isophorone	N	
Naphthalene	N	
Nitrobenzene	N	< 0.025 mg/L
N-Nitrosodimethylamine	N	
N-Nitrosodi-N-Propylamine	N	
N-Nitrosodiphenylamine	N	
Phenanthrene	N	
Pyrene	N	
1,2,4 - Trichlorobenzene	N	
Aldrin	N	
α- BHC	N	
β- BHC	N	
γ- BHC	N	
δ- BHC	N	
Chlordane	N	< 0.0124 mg/L
4,4'- DDT	N	
4,4'- DDE	N	
4,4'- DDD	N	
Dieldrin	N	
α-Endosulfan	N	
β-Endosulfan	N	
Endosulfan Sulfate	N	
Endrin	N	< 0.00124 mg/L
Endrin Aldehyde	N	
Heptachlor	N	< 0.00124 mg/L
Heptachlor Epoxide	N	< 0.00124 mg/L
PCB - 1242	N	
PCB - 1254	N	
PCB - 1221	N	
PCB - 1232	N	
PCB - 1248	N	
PCB - 1260	N	
PCB - 1016	N	
Toxaphene	N	< 0.0124 mg/L
Chloromethane	N	
Chlorpyrifos	N	
Demeton	N	
Dichloromethane	N	
(2,4-dichlorophenoxy) acetic acid (2,4-D)	N	
Di-2-Ethylhexyl Phthalate	N	
MBAS	N	

Slodge

Parameter	Believed Present (yes or no)	Concentration
Lindane	N	
Hydrogen Sulfide	N	
Silverx	N	20049 mg/L
Tributyltin	N	
Kepon	N	
Malathion	N	
Methoxychlor	N	
Mirex	N	
Monochlorobenzene	N	0.00124 mg/L
Parathion	N	

- | Parameter | Concentration |
|-----------|---------------|
|-----------|---------------|

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- [illegible]

Appendix E
Non-Hazardous Declarations

- 1. Cargill Meat Solutions, Corporation LLC**
- 2. Pilgrims Pride Corporation of Virginia**

Appendix E

Pilgrims Pride Corporation of VA

a. **Statement for Plant Operations**

The "Virginia Hazardous Waste Management Regulations" and the "Virginia Solid Waste Management Regulations" do not apply to wastewater produced by the Pilgrims Pride Corporation of VA poultry processing plant. There will be no hazardous waste stream discharged from this plant to the Broadway Regional Wastewater Treatment Facility.

b. **Certification**

I certify that the waste described in this application is non-hazardous and not regulated under the Resource Conservation and Recovery Act.

Pilgrims Pride Corporation of VA

By:


Sharon Wetzel

Director of Environmental Affairs

8/24/2013
Date

Cargill Meat Solutions Corporation

a. **Statement for Plant Operations**

The "Virginia Hazardous Waste Management Regulations" and the "Virginia Solid Waste Management Regulations" do not apply to wastewater produced by the Cargill Meat Solutions Corporation processing plant. There will be no hazardous waste stream discharged from this plant to the Broadway Regional Wastewater Treatment Facility.

b. **Certification**

I certify that the waste described in this application is non-hazardous and not regulated under the Resource Conservation and Recovery Act.

Cargill Meat Solutions Corporation

By:


Jimmie Ritchie
Complex General Manager

9/16/13
Date

RECEIVED

DEQ - Valley

JUN 20 2013

VIRGINIA POLLUTION ABATEMENT APPLICATION NO: _____

FORM D

FILE: _____

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART DV NON-HAZARDOUS WASTE DECLARATION

For waste to be land applied, the owner, as defined by 9 VAC 25-32, must sign the following statement.

I certify that the waste described in this application is non-hazardous and not regulated under the Resource Conservation and Recovery Act or the Virginia Hazardous Waste Management Regulation (9 VAC 20-60).

John E. Cottman
(Signature of Owner)

Date: 6/17/13

John E. Cottman
(Printed Name of Owner)

WWTF Supt.
(Title)

Broadway Regional Wastewater Treatment Facility
(Facility Name)

VA 0090263
(Permit Number)